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"NON-COGNITIVE VARIABLES AND SELF-PERCEIVED ACHIEVEMENT".

BY

© CLIFFORD IWO BEREPIKI

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ABSTRACT

The main purpose of this research was to examine 'Self-Perceived Achievement' (SPA) of high school students in the context of twenty-eight non-cognitive variables.

SPA was purported to reflect the qualitative self-evaluation by the student himself as to how, in his own view, he is doing in his academic work. It is thus assumed to be a result of the youth's feelings in relation to his actual academic achievement, his own life aspiration, intellectual ability, etc. Empirically, SPA was taken to mean the students' responses to:

"Which of the following best describes the kind of grades or marks you get at school?"

Excellent grades
Above Average grades
Average grades
Below Average grades
Very Low grades

The twenty-eight variables consisted of eighteen scales and ten pieces of information, biographical and demographic in nature. All the variables came from the Youth Research Center Survey Questionnaire (Strommen and Gupta, 1971). The scales indicate beliefs, concerns and values of high school youth. Each of the variables had two, three, four or five (e.g. SPA) levels as the case may be.

The sample consisted of 6534 North American Youths who were high school students in 1969/70 in the United States of America. It was drawn by using multi-stage-proportionate-random sampling technique.

The data obtained were examined primarily through Analysis of Variance (ANOVA). There were twelve factorial designs containing two,

three, or four factors in each. The analyses of data were limited to the first order interactions, simple and overall main effects. Contrasts were examined where necessary. Higher order interactions were not considered.

The results from each design were given separately, with occasional practical implications. Correlation of SPA with each of the twenty-eight variables was also calculated, mainly for the sake of curiosity. A number of interesting results were found, several having important practical implications.

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To them it is "O MIE TE" (Thank you all) -- (in Kalabari-Ijaw: Nigeria).

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CHAPTER I

INTRODUCTION

For the sake of convenience, learning is considered to belong to three domains: cognitive, affective, and psychomotor. However, in actual learning-teaching situations, these three domains can hardly be separated, as emphasized by **Tyler** (1973, p. 1),

> "The analysis of human behavior into three chief categories, cognitive, affective, and psychomotor, is a construct employed to differentiate certain aspects of human reactions roughly similar to the age old distinctions between thinking, feeling, and acting. .... In fact, most behavioral events accessible to consciousness involve all three aspects".

Academic achievement can thus be seen as a combination of (a) cognitive domain relating to knowledge, and "intellectual abilities and skills" (Bloom et al., 1956), (b) non-cognitive or affective domain pertaining to values, beliefs, and other socio-psychological outcomes (Krathwohl, et al., 1964), and (c) psychomotor domain concerned with motor skills (Bloom, ed. in press).

As an individual grows, he tends to perceive his own achievement in a certain way, resulting in what may be termed "Self Perceived Achievement" or SPA. Whereas the student's intellectual ability perhaps plays a major role in determining his SPA, it is suspected that certain socio-psychological and biographical variables or antecedents also play an important role in it. Whether this actually is so or not is the subject matter of this research.

Background to the Study

As it will be clear from the preceding section, the research reported here pertains to Self-Perceived Achievement (SPA). This variable was systematically examined in relation to certain selected non-cognitive variables. The term means here the qualitative self-evaluation by the learner himself - how, in his own view, he is doing in his academic work. If he thinks that he is not doing well at school, it may evoke in him some anxiety or concern. If, on the other hand, he thinks he is doing well, he may tend to feel secure and satisfied. It will probably involve the learner's understanding about himself and his environment, his intellectual ability, and his use thereof, his aspirations and how he attains them, finally how he judges his actual performance in relation to what he thinks to be his assets and liabilities.

The writer is as yet unaware of any research done on this concept. It should, however, be a major concern not only to classroom teachers, parents, sociologists, and counsellors, but also to educational psychologists.

SPA can be viewed in terms of both cognitive and non-cognitive dimensions or variables. Whereas the cognitive aspect deals with the handling of knowledge through the various types of mental processes, the non-cognitive aspect comprises the emotions, attitudes, values, concerns, and other affective components associated with learning.

The non-cognitive factors largely help the learner in setting specific life goals or level of aspiration for himself which he may or may not attain eventually as could be revealed in his report about his own SPA. SPA reported by a person may, thus, vary from very-high to very-low, depending upon whether or not his goals are met according to his own expectations.

A cursory inspection of the literature revealed that ample research has been conducted on actual academic achievement and its correlates (Brookover, Paterson, and Thomas, 1948; Bloom, et al., 1956; Roth, 1959; Krathwohl et al., 1964; Holt; 1964, Krathwohl, 1965; and Torrance, 1968); on level of aspiration (Mack, et al., 1956; Dynes, Clarke and Dintz, 1956; Reissman, 1953; Sears, 1940, 1941; Sivertsen, 1957; Swinehart, 1963; and Versteeg, 1971); and also, on academic self-concept. Roth, (1959); Everett, (1971); Brookover, Thomas and Paterson, (1964); Brookover, et al., (1967), Dyson, (1967); William, (1968) are among a long list of studies that have elaborated on academic self-concept (or self-image).

Contrariwise, it seems that SPA which is neither synonymous with level of aspiration, nor academic self-concept, has been almost overlooked. If at all it was included in a previous study, it was considered merely as an intervening variable (e.g. by Kelly, 1971) rather than as a major, independent variable, fit to be studied with respect to its correlates, non-cognitive in nature. This may be so because of the various difficulties likely to be encountered in studying such variables. One of them could be the fear of discriminating against the individual's values and philosophy, attitudes, and concepts (Scriven, 1965, 1970). There is also the problem of devising valid and reliable instruments for measuring those variables. However, such difficulties notwithstanding, a study of SPA in relation to pertinent non-cognitive variables has value because of its bearing upon mental health.

If non-cognitive variables which have some bearing upon the learner's self-image (and, therefore, his SPA), can be identified, the information may provide a research-based guidance to the classroom teacher. He can know, for example, to which variables he should pay more attention in his professional life. The difference between the subjects who report high SPA and those who report low can be due to several psychological and sociological variables impinging upon them. One of them is the level of self-image which may be high or low. It could be that a high SPA subject is experiencing satisfaction and feelings of adequacy and fulfilment whereas his counterpart with a much lower SPA may be experiencing emotional and mental dissatisfaction or feelings of inadequacy and, therefore, needs appropriate counselling.

It is not inconceivable that in certain cases, a variety of internal and external pressures may be impinging on the student regardless of his intellectual and motivational levels. Some of these may come from teachers, parents, peers, schools, family and, perhaps, from the society. The student may subsequently be compelled to set unrealistically high achievement as his goal in order to conform to these pressures. On the other hand, a student may sometimes be living under unfavourable conditions, thereby failing to experience the necessary motivation conducive to setting appropriate level of aspiration for himself. If his aspiration is low, his SPA may tend to be high, and vice versa. Such "unfavourable conditions" may be "teacher-types" (Rossi, 1961), "home conditions" (Stephenson, 1958) or "school climate" (Coleman, 1960).

The following may clarify the point further.

(1) Subject (A) comes from a high socio-economic background. His intellectual level is high. But he has orientation to business and his life expectation is moderate in relation to his capability. His SPA is likely to be medium rather than low if he has not perceived the relevance of high academic achievement to his life-expectation as a prospective businessman.

(2) Subject (B) has the same level of intellectual ability and similar socio-economic level as A except that his parents are professionals and expect the subject to set a high level of aspiration for himself and do very well academically. As he struggles to do so he will tend to report a low SPA.

(3) Subject (C) is typified by high Ability, high SES, low L.E., with satisfaction, and so, high SPA.

Thus it is assumed that the level of SPA is based upon a combination of the student's actual academic achievement and his satisfaction in achieving the level of aspiration he sets for himself, as illustrated in Figure 1.1, page 6. Consequently, there will be various levels of SPA arising out of the combinations of (a) Intellectual Ability, (b) Life Aspiration or Expectation and (c) Feeling of Satisfaction about one's Aspiration. Combinations of Figure 1.3 (A-E) may, thus, typify most youths.

It can be similarly illustrated with several other examples that if the intellectual ability and SES are similar, but marked differences

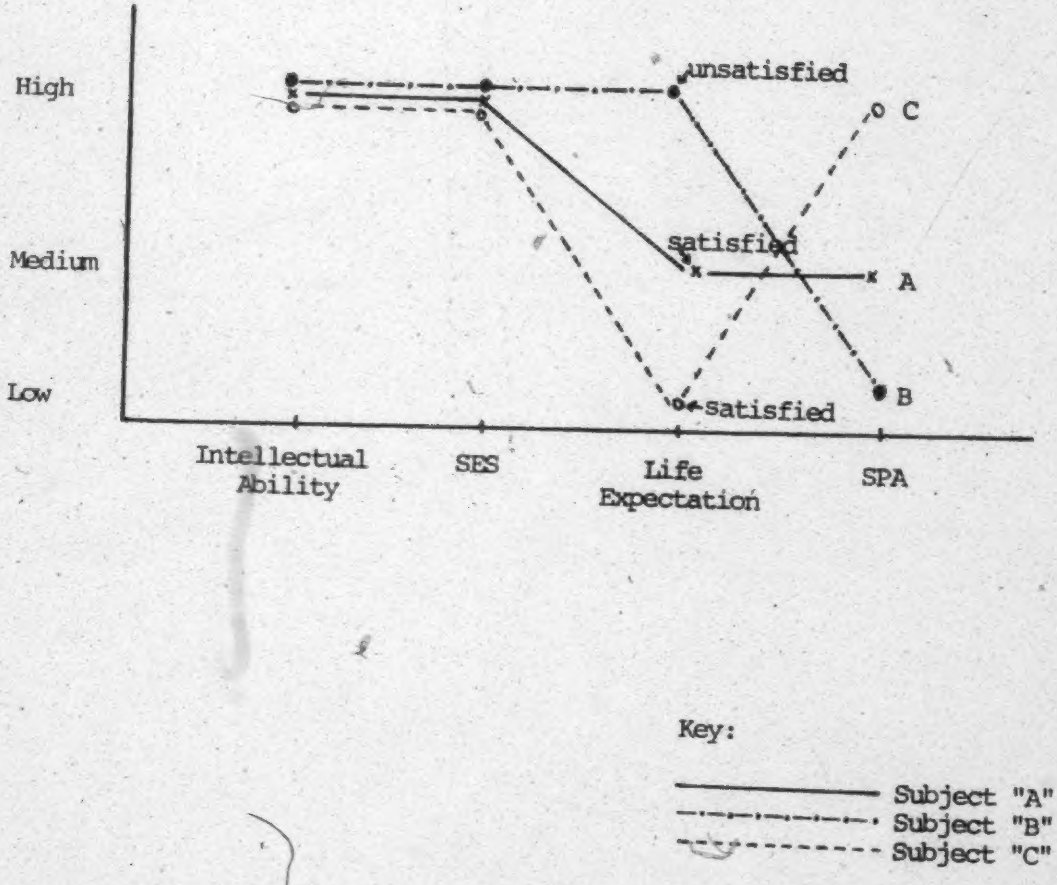

FIGURE 1.1 Subjects A, B, or C - all equally bright and from the same SES but with different L.E. will have different SPA.

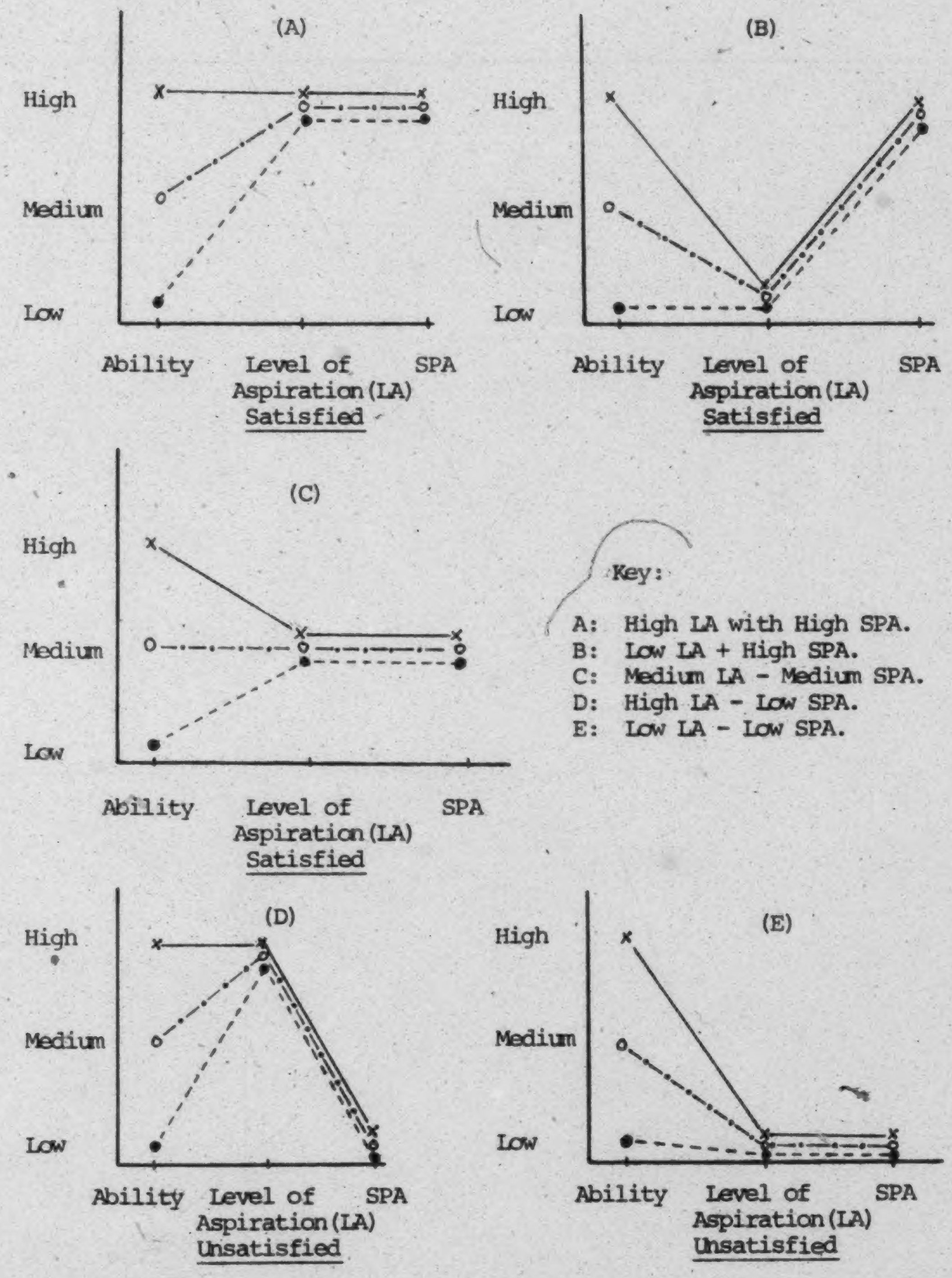

FIGURE 1.2 SOME PATTERNS AND LEVELS OF SPA

exist in the subject's life expectations (and in their probable concomitants - family security, motivation, and so on), SPA will likely vary according to whether or not the subject feels that his life expectations are satisfied in his academic pursuits. Some SPA's may prove satisfactory to students while others may not. This may affect the student's motivation, attitudes, values and concerns. An SPA may be seen in two ways. For example, it is influenced by certain psychological and sociological variables and, at the same time, influences those types of variables in the long run. The identification of non-cognitive variables which have bearing upon SPA is, thus, of interest in this study.

The Problem

As stated earlier, the central theme of this study is an attempt at identifying certain non-cognitive variables having bearing upon self-perceived achievement (SPA).

The major variable of interest here was SPA. It refers to self-perceived level of academic achievement expressed by the subject in qualitative terms about himself. This self-report may be an outcome of a host of variables -- internal or external influences on the subject. Some of the external variables may be (a) how recent an experience the subject had had about his achievement (Thorndike's Law of Recency, 1933), and (b) the way he got his latest feedback. Other variables have also been suggested as having some influence on the subject's self-report. For example, Combs and Snygg (1959), and Combs and Soper (1957) considered the following:

1) The clarity of the subject's awareness, 2) The availability of adequate symbols of expression, 3) The willingness of the subject to cooperate, 4) The individual's feeling of personal adequacy, 5) The individual's feeling of freedom from threat, 6) The social expectancy.

The subject in this situation will consider most of the factors such as the ones mentioned above while estimating and expressing his level of SPA.

The theoretical support for this research is derived from the studies of Strommen and Gupta (1971), Mead (1934), Combs and Snygg (1959), and Torrance (1962, 1966, and 1968), who have variously emphasized the importance of adequate self-image and involvement of students in a purposeful, participatory fashion. They have also stressed how these variables could have differential influence on self-perceived achievement (SPA).

SPA was assumed to be reflected qualitatively in the subjects' answer to Question - #189 in the Youth Research Survey (Strommen and Gupta, 1971). It runs thus:

> Which of the following best describes the kind of grades or marks you get at school?
>
> A. Excellent grades.
> B. Above Average grades.
> C. Average grades.
> D. Below Average grades.
> E. Very Low grades.

The pool of variables from which the correlates of SPA were sought to be identified here consisted of eighteen scales of attitudes, concerns, values, beliefs, and appreciations (all within the affective domain) (Table 1.1) and ten variables, biographical and demographic in nature, eg. sex, age, socio-economic status, religiosity, religious affiliation, educational level of parent/guardian, drug usage, size of family, type of school attending and family unit of youths (Table 1.2). It was hoped that most of these twenty-eight variables had some bearing on SPA.

Detailed justification for the inclusion of the variables in this study is given in Chapter III.

The population studied consisted of North American high school students in the United States, aged approximately fifteen to eighteen years. They came from a wide variety of cultural, educational, socio-economic, and religious backgrounds, mainly of ecumenical type.

The instrument used is the Youth Research Survey developed for the Youth Research Center of Minneapolis, Minnesota, by Strommen and Gupta (1971).

The analytical approach used was basically factorial designs. Some use was also made of Pearson's Product Moment correlation.

Significance of the Study

The writer is as yet unaware of any research directly bearing on the subject "Self Perceived Achievement". Considering its probable importance, it should, however, be considered a major concern not only of classroom teachers, parents, sociologists, and counsellors, but also of educational psychologists - in fact of all those dealing

TABLE 1.1

CLASSIFICATIONS OF THE 18 SELECTED SCALES.

Variable No.	YRC Scale No.	Categories and Scales	No. of Items	Cronbach's α
		I. FAMILY & INTERACTIONAL MODES		
1	1	Family Unity	10	.89
2	2	Parental Understanding	9	.88
3	3	Family Pressures	7	.56
18	24	Family Social Concerns	8	.70
		II. SELF ESTEEM OR SELF REGARD		
5	5	Lack of Self-Confidence	8	.78
7	7	Personal Faults	12	.87
10	12	Maturity of Values	7	.61
12	14	Moral Responsibility	10	.73
14	18	Self-Regard	13	.79
16	22	Youth Group Vitality	10	.80
17	23	Adult Caring	11	.81
		III. WITHIN SCHOOL PROBLEMS		
6	6	Academic Problems	9	.85
8	8	Classroom Relationship	15	.87
		IV. SELF AND SOCIAL INTERACTION		
4	4	Life Partner	7	.81
11	13	Orientation for change	11	.75
13	15	Meaningful Life	17	.76
9	9	National Issues	11	.86
15	19	Human Relations	12	.75

TABLE 1.2

THE LIST OF 10 SOCIO-BIOGRAPHICAL VARIABLES.

Variable No.	Socio-Biographical Variables	Survey Item Number
19	(i) Sex	Personal Data
20	(ii) Age	- ditto -
21	(iii) Socio-Economic Status of Parents	195
22	(iv) Religiosity of Youths	190
23	(v) Religious Affiliation of Youths	Personal Data
24	(vi) Parent's/Guardian's Educational Status	196 & 197
25	(vii) Drug (including Alcohol) Usage	198
26	(viii) Family Unit	202
27	(ix) Type of School attending	193
28	(x) Size of Family	214

with youth.

It should be obvious from the above that this study attempted to explore a relatively new and, at the same time, an important area in education, largely overlooked so far. This could, therefore, be regarded as its major contribution. This also tended to make it more of a pilot or exploratory study which may form the basis for further researches of this kind.

Although the research bore directly on North American youth, particularly USA, most of its findings could probably transcend high school youth across cultures. The findings should improve understanding of youths and also have desired application in youth counselling and guidance, curricular development, educational innovations and the like.

It should generate some interest in further research in this area. It would also provide to this researcher further experience in research methods which may be useful in subsequent studies in a very different psycho-social and cultural setting.

CHAPTER II

REVIEW OF LITERATURE

Introduction

There seems to be hardly any study so far bearing directly upon "Self Perceived Achievement" (SPA). The closest one to it is a recent study by Kelly (1971) reviewed later on. Under the circumstance, this chapter attempts to examine studies which have rather remote relevance to the present study. The review is based on the four groups of the scales and also on the biographical data included.

1. Parental or familial contribution to Achievement

The variables related to family considered in this study are family unity, parental understanding, family pressures, and family social concerns.

A major contribution which parents or the family can possibly make to influence a youth's academic achievement is to enhance the latter's feelings of self-acceptance through showing interest in him and by accepting him. Many research findings have pointed to the importance of this factor. Rosenberg (1965), for example, studied parental interest of youths and youth's self-conception among high school juniors. It was discovered that the students who reported punitive responses tended to have lower self-acceptance than those who gave non-punitive responses. Other studies have confirmed the importance of parents' attitude toward youngsters' self-acceptance which, in turn, has been found to enhance youngsters' academic achievement (Bronfenbrenner, 1961; Helper, 1955; Gecas, Thomas and Weigert, 1970; Rosen, 1961).

The failure of some disadvantaged children to keep up at school seems to be due partly to the adverse influence of family background (Coleman, Campbell, and Hobson, et al.,1966). It has often been suggested that minority pupils do not aspire to achieve in school, do not aspire to a college education, or do not have ambitions for high status occupations. For these reasons, it is suggested that they perform poorly in schools. The study conducted by Gottlieb (1964) seemed to support the view that individuals from disadvantaged families have a low level of aspiration. However, among white and negro families, for instance, Rosen (1961) showed that aspirations are similar but expectations of realizing these aspirations differ.

Sullivan (1947) also observed that certain patterns of parental or familial attitudes toward their youngsters during the process of socialization could be associated to negative academic results in youths; that is, instead of the youngster doing well at school, the attitude of his parents could bring about unsatisfying academic results. For example, some parents could build certain wrong types of self-conception and self-perception in their youngsters in such a way that they sometimes develop over-anxiety which is not conducive to academic success (Grooms and Endler, 1960).

Rogers (1961) considered certain attitudes of parents or the family as being unconducive to learning in their interaction with youngsters and warned against them. He suggested that such unconducive parental attitudes show certain dysfunctioning signs in the formation of youth's self-acceptance.

Dynes, Clarke, and Dintz (1956) also suggested that although the experience of the family could serve as a variable for the levels of youths' occupational aspiration, it could, on the other hand, become a source of anxiety if the youth is not capable of achieving such a goal. Parental socio-economic status has also been found to be a source for youth's success-striving,but,sometimes,it has its advantages and disadvantages (Douvan, 1956; and Empey, 1956).

Self-acceptance, according to Allport (1971), is the striving generic force in youngsters towards achievement, self-direction as well as, 'becoming' of youths' personality growth. It is also conceived by Allport that the effort of the family to socialize the youngster is very important and must continue consistently with the youth's growth and development. The youth may start with developing a conscience by adjusting to the 'musts', but he should also develop an independent and self-guided attitude to develop the 'oughts' as self-components of his value-schemata. Such a self-direction would serve as the urge for his academic-striving, self-image, and life aspiration, and thus become continuous or propriate striving for success (Allport, 1971). Brantley (1969) noted that a youth undergoing family stress may be more prone to academic failure than one who is not.

2. Achievement and Self Concept of Ability

Self-concept about one's academic ability is formed as a result of self-acceptance which, in turn, grows at least partly out of parents' acceptance and interest and usually gets extended to the school. Mead (1934) pointed out that a youth's success in academic work and learning processes is closely related to his self-concept. On the other hand, lack of adequate self-concept and inability to adjust to the school environment have been found to be common with school drop-outs (Torrance, 1968; Holt, 1964).

In the school situation, however, the youth is expected to purposefully select correspondingly desired learning behaviour patterns, as suggested in Allport's Theory of Becoming (Allport, 1971); also the youth, in order to achieve, is expected continually to endeavour to relate his environment to himself during his change and development (Mowrer, 1946).

High academic achievement, therefore, may be related to how well a youth endeavours to strive for success. If he is satisfied that he is meeting the level of aspiration, he will report a high SPA. When a youngster reports a high SPA as a result of satisfying his ability and level of aspiration, it is believed that he is undergoing a healthy development with some self-direction (Maslow, 1968; Allport, 1971), or with self-monitoring reinforcement system (Bandura, et al., 1967).

The academic performance of the youngster, whether high or low, is capable of affecting his self-concept. That is, he feels 'good' when he knows he has done well but could be depressed when he realizes that he did badly (Benjamin, 1950; Roth, 1959). Kelly (1971) included "Academic Self-Evaluation" as a variable while studying School Avoidance and Deviant Behaviour among high school students. Some of the results Kelly reported were; (1) a high relationship between grades and academic self-evaluation, (2) high interrelationships among school failure, academic self-evaluation, school avoidance, and deviance.

Brookover, Erickson and Joiner (1967) discovered that self-concept of ability and school achievement in the High School are positively related. This is consistent with an earlier study on the "Relationship of self-image to achievement in the Junior High School" by Brookover, Paterson, and Thomas (1964). Also Fink (1962), and Everett (1971) arrived at similar conclusions. The result of a realistic self-image is further enhanced by the prestige and acceptance accorded it by the school, teachers, peers, and parents. For instance, Kelly (1971) reported that some parents tended to erode their youths' self-concept by withholding certain privileges as a result of school failure shown on school reports such as, the use of the family car, outing, dating, and pocket allowances in severe cases. On the other hand, when the youngster does well at school, he becomes the 'pride' of the family and to himself, thus reinforcing his self-acceptance.

The variables referred to as aspects of academic self-concept in this study are self-confidence, self-regard, personal faults, maturity of values, moral responsibility, adult caring and youth group vitality. Each of these variables is considered to be capable of contributing to the youngster's academic self-concept which eventually could enhance his perceived achievement and vice-versa.

3. Academic Achievement and 'Within-School' Problems:

Academic problems which relate to how well the youngster is adjusting to his school environment and thus making appropriate progress, and also classroom relationship he encounters, are the two variables to be considered here.

A variety of school problems have recently been reported by educational psychologists and sociologists as being responsible for under-achievement, misbehaviour and maladjustment. The studies of Hargreaves (1967), Rhodes and Reiss(1969), Schafer et. al. (1968); Stinchcombe (1964) have confirmed this notion.

Some of those problems can be attributed to the school system, the teachers, the peers, and the youngster himself.

(a) The School has its own method of ascribing labels to its students. Such labels as 'gifted', 'special', 'average', or 'slow' classes (or streams) are sometimes used. Some of these labels are stigmas and could 'dash' the self-image or self concept of the students. Hargreaves (1967), Hansen (1967), Kelly (1971); and Williams and Cole (1968) are among a number of authors who have drawn attention to this problem in schools.

Also, the school atmosphere, whether it is accepting, understanding, and has set up adequate curricula or not, is a matter that affects students academic self-concept and achievement (Lippitt and Gold, 1959; Polk, 1969).

(b) School teachers also have an important task to perform with regard to teacher-pupil as well as teacher-parent relationships (Bush, 1954). There is always a reflection in the youth's perception of the teacher according to how the teacher feels about him. This was clearly brought out by Davidson and Lang (1960). Snyder (1947) also suggested the possibility of some teachers causing maladjustment in youths as a result of their attitude toward the students. An optimum teacher-pupil interaction is called for by Soar (1968) if the youth is to be given the maximum opportunity to develop his self-image to the fullest with respect to his academic pursuit.

(c) The Peers: Although one would expect that the greatest influence on the youth would come from the interaction of the school and the teacher with the student, a considerable measure of behavioural adjustment leading to academic success or failure could also come from his peer interaction or subculture. This cleavage is seen to be a common characteristic of youths (Bonney, 1946). Some measure of successful and unsuccessful training of youths has been seen as coming from peer influence in sociometric studies. Sometimes, the student could also benefit from certain admirable traits of personality through his relationship with some peer group which has a purposeful direction and striving-for-success as distinguishing factors of its status objective (Echelberger, 1959). This advantage has also been detected in youth sub-cultures and student achievement studies where the former happens to be oriented to achievement (Coleman, 1960).

(d) Some form of within-school problems can be traced to the youngster himself. Some youths, for instance, do not possess the ability to cope with change in the school. Some children who may have difficulty in adjusting to their parents may also find similar difficulties at school. Others also require some special situation, and perhaps involvement and active participation in school activities (Schafer, 1968; Stinchcombe, 1964). In certain cases where the youth is unable to adjust to the learning situation in order to make good grades, he either becomes a drop-out or rebels against the school authorities, possibly ending up as a delinquent (Rhodes and Reiss, 1969).

4. Achievement and Self and Social Interaction

The preceding discussion on the youth's need to interact successfully with members of his family, the community, the school, and the peers in order to develop an adequate academic self-image also applies here (Schafer, 1968; and Rhodes and Reiss, 1969). If, on the contrary, he is unable to adjust reasonably well, it is likely that he would not be socially accepted, and hence his self-acceptance or self-image could be lowered and his achievement rendered unacceptable.

The literature reviewed above has mainly dealt with the various factors that could influence youths' academic achievement and thus his self-acceptance and self-image, specially in the context of the school. It included the family, the school environment, and the society at large, and also how the youth develops his own self-evaluation.

The literature related to the 10 additional biographical and demographic variables selected for this study is reviewed in the next section.

Literature on the Additional Variables Included in this Study and Their Rationale.

(a) Sex: Male or Female: Sex difference in youth can play an important role in identification processes, setting level of aspiration, and developing self-concept or image. For example, the youth will tend to identify with persons of his (her) own sex as a 'significant other' who may become a more dominant figure. This can influence his or her own life expectation (Marke and Nyman, 1963; Kugelmas and Breznitz, 1966). This, in turn, may affect SPA.

During puberty, each person develops his or her own sex related characteristics. Sometimes, girls find it difficult to determine just what society expects of them, especially since the role of women in our society is in a state of flux. It is, therefore, possible that a sister and a brother from the same parents and having similar intellectual ability could set for themselves different levels of expectations (Garrison, 1965), and hence report different levels of SPA. For instance, girls often have lower life or academic expectations or levels of aspirations as compared to boys and, therefore, may have a lower expectation about achievement in spite of their abilities. In this case, the reported SPA may be deemed high enough or satisfying to them. On the other hand, boys of comparable ability may plan to be as economically or socially successful as possible and may, therefore, set a high aspirational level. They may, therefore, report lower (or unsatisfying) SPA.

(b) Age: 15, 16, 17, and 18 years.

It can be assumed that as the kid gets older, he has greater awareness of his role in life. With age, the need for achievement may become more obvious and higher so that the youngster is more likely to set up higher aspirational level for himself as he grows older. It is, therefore, envisioned that the SPA of 15 year olds will be higher than that of 17 year olds, other things remaining the same. At about 16, the ideas of the youth are becoming more crystalized than was the case at 15, the latter tending to be more influenced by his peer or gang culture in which serious life expectations tend to be minimal. But by about 17 years, there tends to be a "return-home" attitude to the father or mother as the most "significant other" in normal cases (Bealer, Willits, and Maida, 1964; Bandura, 1962). This may also apply more to boys than to girls, so that age may also have interaction with sex (making it advisable that these two variables be included in the same design).

(c) Socio-Economic Status (SES) of Parents.

The socio-economic status of parents can be a factor in setting up level of aspiration. For instance, youngsters from higher SES may feel more secure and realistically hopeful about achieving their life expectation (particularly, if that entails financial support and adequate motivation) than those of low SES. Youngsters become more constrained or limited in the kind of support they require in a lower SES family than in a higher one. The type of life expectation which the youngster sets up for himself in a higher or lower SES family may, therefore, reflect in his SPA.

Goldberg (1964), for instance, suggested that the parents' socioeconomic background and plans for financing the youngster's higher education can affect the aspirational level or motivation of the youngster. Since lower SES youths seem to set lower aspirational levels for themselves (perhaps due to lack of inspiration from their parents), whatever they achieve at school may be perceived by them as satisfying.

The reverse may be true for those from higher SES homes who, due to high aspirational levels, would look on whatever they achieve as being unsatisfying to their parents and to themselves and, therefore, they may tend to report a lower SPA. Here, again, the argument may hold more for boys than for girls, thus suggesting interaction of sex with SES.

(Since interaction of sex with age was envisaged earlier, age, sex, and SES, therefore, will need to be included in the same factorial design).

It can be surmised then that levels of SES can possibly play an important part on the youngster's life-expectation in educational and vocational terms and hence reflect in the SPA (Sears, 1951; and McKinley, 1966).

(d) Religiosity:

Religiosity as considered in this study was in terms of how often the youngster attends church services, Sunday schools, synagogues, temples and other religious meeting places. A parent may have high religiosity while the youngster may not.

Weigert and Darwin (1970) suggested that in the process of youths' socialization, religiosity (frequency at religious meetings) has some effect on youths' behavioural patterns, particularly so if that religious affiliation is of the traditional type. This may affect how the youth sees his world and sets level of aspiration for himself - a trend which may decrease from high to low religiosity of the youngsters. It seems likely that youths of high religiosity may tend to set higher level of aspiration for themselves as a result of the influence of the type of socialization modes they have undergone (assuming that high religiosity effect is characterized by the socialization process) than others of lower religiosity. If this assumption is valid, youths of higher religiosity would tend to report lower SPA, whatever their abilities, than their counterparts of lower religiosity who may tend to report higher SPA. Religiosity, therefore, could be related to achievement-motivation to youngsters which enables them to set life expectations and, therefore, may have bearing upon SPA's.

(e) Religious Affiliation:

There are a number of religious bodies to which the youngsters under study were affiliated. Each of these bodies has its own doctrines and observances, dogmas, philosophies, and resulting attitudes, and it is supposed that the youngsters would be trained along those doctrines. All of these may tend to influence how the youth looks at the world in which he lives. For instance, he may look at it materialistically or spiritually, or perhaps neutrally. These, in turn, may contribute to setting up his life expectations in a particular direction. For instance, youths in a certain denominational affiliation may think that setting high life expectations may be a matter of the "flesh", and that more importance should be attached to things of the 'Kingdom of God' so that life expectation should only be on the basis of bare existence.' The more traditional, monastic, nunneric, and spiritual types of religions are some of the common examples which could influence youngsters in setting low life expectations for themselves.

Some religions may tend to identify themselves more with social aspirations, politics, or material satisfaction. Youngsters who affiliate themselves to such religious school system will tend to set higher life goals or aspirations for themselves which, in turn, will reflect in their SPA's. On the other hand, religions which under-play 'wordly' aspirations could help youngsters to set normal or very modest life goals and, therefore, may report a high SPA. Weber (1930), for instance, suggested that social goals and life expectations can differ considerably among Protestants and Catholics. Perhaps, this difference could be revealed in the Catholic, Protestant, and other youngsters of the study in their SPA.

Also, that religious orientation of the school has some effect on education is shown in a study which reports that Catholic Parochial school students compared unfavourably with Protestants, Jews, and Catholic students in Public Schools on a test of Openmindedness (Quinn, 1965).

The importance of the youngster's religious attitude within his religious affiliation has been pointed out by Erickson (1964) also.

(f) Parent's/Guardian's Educational Status:

The educational status of the parent or guardian (e.g. the principal 'bread winner' of the family) can be related to the academic motivation of the child, particularly if such an educational status is high.

Some parents seem to 'drift with the tide', and can hardly offer much education to their children. Others realize what education implies socially and economically and tend to transfer this notion or attitude to their youngsters. This could influence the scholastic achievement drive or academic orientation of the child. It is assumed that the parents of this type are more capable of helping their youngsters in setting high life expectation for themselves. This is likely to reflect in the SPA of the latter. In certain educated families, the child, however, has a better opportunity for being introduced at an earlier age to learning situations and learning materials than in others with limited opportunities. All these and the parents' interest in, and concern for, the youngster's educational success can help the youngster to set higher levels of aspiration and, therefore, low SPA.

For example, many children in highly educated families read books, magazines and newspapers, watch television programmes, listen to radio and discuss intelligently with their parents even before they are ready for school. While at school, these opportunities enrich their language and social development and also their functional intelligence. By and large, through this type of educational awareness, coupled with the parents' anxiety about the youngster's life-goal, the youngster could set a certain type of educational and vocational goal which can be reflected in his SPA. The less-privileged youngsters who suffer from the lack of such educational advantages tend to set lower or medium life expectation and, therefore, may report high SPA.

(g) Use of Drugs (including Alcohol):

Drugs and alcohol are considered here as any form of chemical agent introduced into the human system, the reaction of which is capable of impairing or affecting the nervous system of the individual, making his normal functioning difficult. Some of these chemicals are mild and may have very gradual effect, while others may have severe and long lasting results. It is conceivable that youths who habitually indulge in drugs or alcohol are very likely not to be able to settle down to their academic work. Since they cannot do well at school under these conditions, they may tend to set low life expectation for themselves. They may even be carefree about it. Whatever their ability, any level of achievement will tend to be looked at as being satisfying. Such youths may be said to have learned how to escape or avoid temperarily (or possibly permanently) realities of life by being under the influence of drug or alcohol (Mutter and Schleifer, 1966). Therefore, there is likely to be substantial difference in the life-expectations of drug-using and non-drug-using youths, and their SPA. Therefore, the reported SPA for drug users may be high, whereas that of others low, all being equal.

(h) Family Unit:

The changing role of women, incidence of divorce and increase in single-parent families are a few factors which can influence the child's life expectations and, therefore, SPA. A stable and happy family, for instance, is in itself an achievement motivation to the youngster, whereas an unstable or broken family situation may not be able to provide such a psychological support to him (O'Neill and Alexander, 1971). In a broken family, it may be difficult for the youngster to set a realistic life expectation for himself and, perhaps, he may find that it is not easy to achieve his life goal. In this case the SPA will tend to be high and satisfying to the subject. Some single family cases may be the outcomes of drug effects, or some drug-usage could be outcomes of single families. In either case, the youngster finds it difficult to plan a realistic life expectation for himself and, perhaps, he may find that it is not easy to achieve his life goal. In this case, the SPA will tend to be high and satisfying to the subject.

Difficulties encountered by youths in single parent families in the process of identification have been stressed by Parson et al., (1955), and also by Smith (1970). The lack of educational motivation for the youngsters in such single families has been pointed out by Becker and McArdle (1967). This condition could affect the youngster in such a way that he may be unable to set adequate level of aspiration for himself which will eventually reflect in his reported SPA. It could be expected that the child from a disturbed or disrupted family has more difficulties than one from a stable one in setting life expectation (Hoffman and Lippitt, 1960). There seems to be a relationship between family stress (divorce, etc.) and academic under-achievement (Brantley, 1969). It is suspected that the type of family unit may contribute to life expectation and hence affect the SPA.

There could be an interaction between SES and family unit, if it can be assumed that incidence of divorce may result from inadequate economic family support in certain cases and vice-versa.

(i) Type of School Attending. The institutional climate of the school depends largely upon its source of support (and the associated philosophy). This may reflect in the levels of expectations of its subjects. For instance, certain highly reputable private schools tend to accomplish consistently excellent academic results and their students may set higher goals than those studying in less equipped or less costly schools. Also, there may be different emphases on the curricula in certain types of schools. For example, church sponsored schools may spend more time on religious education. Special emphasis may also affect education in vocational and technical schools where training for specific manpower may be more important than general type of education. The type of curriculum or exposure may influence the subjects in setting up life expectations as revealed in the level of SPA (Dougherty, 1965). It may be suspected that SPA's of subjects in public (government sponsored) schools may tend to be higher than those of subjects in private (privileged) schools. In this context, 'Public schools' would mean the ones provided by the government, and 'Private schools' would refer to the type of fee paying school for the privileged class. (It is also likely that some interaction between 'type of school', religiosity', and 'religious affiliation' will be noticed so these variables were incorporated in the same design in this study).

(j) Size of Family

This study will examine the size of family of the youngsters as 'small' or 'large'. 'Small' will refer to those families in which there are less than 3 children, and 'large' to those with 3 or more children.

Size of family, in conjunction with SES, seems to be an important factor in the youngster's life. Children in small families seem to get more attention from parents than those in large ones, other things being equal. Much pressure from the parents may go with size of family and could also compel the child to set an unrealistically high life expectation for himself, leading to lower SPA. In large families, there may be general neglect for lack of proper resources. This may affect life expectation and, therefore, SPA. The youth may have lower achievement motivation, hence lower life expectation and, therefore, higher reported SPA.

CHAPTER III

INSTRUMENT, POPULATION, SAMPLE, DATA AND THEIR ANALYSES.

The Instrument and Its Rationale:

As stated earlier, the instrument used in this research is known as "Youth Research Survey" (YRS). It was developed by Strommen and Gupta (1971) for the Youth Research Centre of Minneapolis, Minnesota, the United States of America. It is a self-report type questionnaire printed in two Books (Books One and Two) and contains 420 items.

Book One entitled "Myself and My View of the World", contains 220 items related to 'Concerns' and 'Attitudes' of youths. These items are considered to be important for the use of counsellors, teachers, and other educators in parochial as well as public school systems. They are also useful to clergymen in congregations and to other social workers who may be interested in helping youths.

Book Two entitled "My Values and Beliefs", has 200 items of a different orientation. They are primarily designed to elicit various information about youths' values and beliefs. This book is intended for use mainly in religious institutions by virtue of the type of questions it contains.

There are two theoretical stances reflected in the questionnaire both of which are directly relevant to the needs of youths. They are: 1) the need for youths to feel accepted by an identifiable family or group(that is mutuality); and 2) the need for youths to be meaningfully involved in something that gives one a sense of purpose (that is, mission). These two stances are deemed to be relevant to most youths macrocosmically in North America irrespective of cultural, racial, denominational or other socio-psychological differences, and are supposed to be reflected in the items of the YRC Survey. These basic needs could be considered as typifying all youth. It is assumed by the authors that both needs must be met for the youth as a person, since he needs a group to belong to and a purpose with which he can identify.

Meaningful life to the youth can characterize itself in two life-styles or clusters of behaviour. The first is finding satisfaction in adventure, recognition, pleasure, personal freedom and plenty, high priority to gaining personal power, physical attractiveness, and skill or expertise. The second polarity is the life aspiration of serving others.

Young people who lack a feeling of belongingness to a group will, it is assumed, be anxious about mutual relationships. On the other hand, youths who experience the warmth and acceptance of a family or familial group will be less troubled over their relationship with others, themselves, or God. They will tend to perceive others and life in general in a favourable light.

Mutuality is reflected in the scales grouped as 'concerns'. They constitute the main theme of the items of Book One. Mission in the life of youths is reflected in the 'BELIEFS AND VALUES' scales embodied in the the items of Book Two.

A total of 280 out of the 420 items of the questionnaire, that is, 2/3 of the total, constitute twenty-five scales. Several of the remaining items are intended to draw-out a variety of useful information. Some of these 'extra-scale' items are personal data questions purported to elicit biographical, demographic and sociological information about youths. These data could be used to enhance the understanding of youths.

Population

The general population with which this study is concerned consisted of high school students in 1969/70 in North America (mainly from the USA). They belonged to one of the following sub-populations: (i) American Baptists, (ii) Southern Baptists, (iii) Episcopalians, (iv) United Methodists, (v) Roman Catholics, (vi) youths of the Twin Cities of Minneapolis and St. Paul (Minnesota), and (vii) Young Life Clubs.

Sampling procedures

From each of the above seven sub-populations, the sample was drawn, using multi-stage proportionate random sampling procedures. The details are given below:

(i) American Baptists: Congregations of the American Baptist Church were stratified according to their membership: (i.e. 50 - 199; 200 - 499; 500 - 999; and 1,000 and over). Those with membership less than 50 were excluded for being too small from the point of view of administrative convenience. The proportion of the total sample to be drawn from each stratum was first decided upon. After this, the required number was drawn randomly, using the table of Fisher and Yates

(1963). The ratio was approximately 1:66, and a sample of 1,038 was drawn.

(ii) Southern Baptists: A sample from this church was drawn from sixteen widely separated States in 50 churches with membership of not less than 200. The youths from each church had to fulfil an additional condition - that of being enrolled in Sunday Schools. As in the case of American Baptists, the sample from each grade level was randomly drawn but the ratio was 1:534 and the sample size, 917.

(iii) Episcopalians: The Episcopalian sample of 593 came from the State of Hawaii drawn essentially at random.

(iv) United Methodists: 500 congregations were chosen from among all the United Methodist churches, half of which (250) were asked to give the Survey to 8 groups of their youths. A sample of 522 was drawn. One would hesitate to call it a representative or a random sample, however.

(v) Roman Catholics: This sample came from Roman Catholic high school students. The high schools were from seven randomly selected Roman Catholic Dioceses, and from each of the selected high schools, approximately 300 were asked to take the Survey in May, 1970. A total of 1,818 (over 85 per cent of those chosen) actually participated. The seven diocesan areas which supplied the sample were: Dubuque - Iowa; Baton Rouge - Louisiana; Manchester - New Hampshire; Rockville - New York; San Diego - California; St. Paul and Minneapolis - Minnesota; and San Francisco - California.

(vi) Youths of Twin Cities (Minneapolis and St. Paul): A randomly selected sample of 922 youths was used.

(vii) Young Life Clubs (comprising 670 Youth Clubs): These clubs were in 10 regions. A third of the area leaders within each region was randomly selected to obtain 31 leaders from 245 clubs. The next stage was to randomly select 20 per cent of the clubs out of the 31 areas so as to obtain 48 clubs. A sample of 1,397 was obtained from 35 of these clubs.

The Sample

On the whole, the total ecumenical sample was close enough to being random. With the active co-operation and interest shown in this study by the various church authorities, it was possible to get the Survey completed successfully. The classification of the subjects who answered at least 95 per cent of the items is shown in Table 3.1.

The present study used the above sample which was predominantly ecumenical. In view of the origin and the nature of the sample, therefore, generalizations from the present study would need to be made with some caution and reservation. They could perhaps not be totally definitive and substantive but may have value in highlighting certain useful findings.

This study was able to use only 6534 from the total sample of 7050, since some were not high school students and on some others, information on one or more of the selected questions was missing. (See Tables 3.2 and 3.3).

TABLE 3.1

THE SAMPLE: CLASSIFIED BY AFFILIATION

	Religious Affiliation	Number
1.	American Baptists	1,038
2.	Southern Baptists	917
3.	Episcopalians	593
4.	United Methodists	522
5.	Roman Catholics	1,818
6.	Twin Cities	765*
7.	Youth Life Clubs	1,397**
	TOTAL	7,050

* Consisted of a variety of religious affiliations - a few also being Jewish.

** An Inter-faith Youth Group.

TABLE 3.2

REFINED SAMPLE CLASSIFIED ACCORDING TO RELIGIOUS AFFILIATIONS (DENOMINATION)

Religious Affiliation	Number
1. Roman Catholic	1,858
2. Protestants	3,181
3. *Others	1,495
TOTAL	6,534

NOTE: *Others included youths in religions other than Christianity, as well as, those not attached to any religion.

TABLE 3.3

REFINED SAMPLE CLASSIFIED ACCORDING TO TYPE OF SCHOOL ATTENDING

Type of School Attending	Number
1. Public	4,415
2. Private	1,638
3. Parochial	323
4. *Others	158
TOTAL	6,534

NOTE: *Others comprised youths in Vocational/Technical or other specialized schools.

How the YRC Scales were derived:

The responses of the 7,050 subjects to the 420 items of the Youth Research Center (YRC) survey were analyzed by its authors using three multivariate techniques of analyses with a view to deriving scales from the items. The three methods used were:

1) Technique of Homogeneous Keying
2) Principal Components Analysis, and
3) Principal Factor Analysis.

Details of the procedures are available in Strommen and Gupta (1971; pp. 7-11).

The YRC Scales:

Twenty-five scales comprising 280 items were extracted from the 420 items of the questionnaire. These scales are supposed to measure relatively independent variables (traits) relating to youths' attitutdes, beliefs, concerns and values.

The items in the scales have two, three, or six alternative answers. The scales vary in length as well.

The raw scores from each scale were linearly transformed to standard scores to give a standard deviation of 10 and a mean of 50.

The scales are grouped by Strommen and Gupta (1971) as follows:

CONCERN SCALES

1. Family Unity.
2. Parental Understanding.
3. Family Pressure.
4. Life Partner.
5. Lack of Self-confidence.
6. Academic Problems.
7. Parental Faults.
8. Classroom Relations.
9. National Issues.
10. God Relationships.

VALUES AND BELIEFS SCALES

11. Interest in Help.
12. Maturity of Values.
13. Orientation for change.
14. Moral Responsibility.
15. Meaningful Life.
16. Religious Participation.
17. Social Action.
18. Self Regard.
19. Human Relations.
20. God Awareness.
21. Biblical concepts.

PERCEPTION SCALES

22. Youth Group Vitality.
23. Adult Caring.
24. Family Social Concerns.

and

25. FRANKNESS OR VALIDITY SCALE

The last one is a Lie Scale (as the title implies, this scale was included to detect youths who lacked frankness, that is, those who were unwilling to respond honestly to the questionnaire.)

Reliability:

The type of reliability aimed at in the process of extracting the scales was homogeneity (Loevinger, 1947, 1948), or internal consistency (Kuder-Richardson, 1937). On the whole, the internal consistency is high or,at least, acceptable. It ranged from .56 to .93 with the median at .80. Some information is available about test-retest reliability also.

Validity:

In establishing construct validity, the questions within each scale were demonstrated to be highly correlated to one another and thus considered to assess the same concept or construct. The manual also gives ample information with regard to concurrent validity in that rationally justifiable predictions were found to have been sustained by the data. For example, seventy null hypotheses were generated on the basis of logic, ten on each of the 'Concerns' scales.

One-tailed (directional) test was applied in testing them. As many as sixty-eight out of the seventy null hypotheses were rejected at .01 level of significance, one at .05 level. Only one null hypothesis failed to be rejected.

The validity of the "Beliefs - Values" Scales was also established similarly.

The Nature of the Instrument and the Data used for this Study.

The major variable of interest was Self Perceived Achievement (SPA). Measures of it were obtained through the responses to question #189 in the YRS which runs thus:

> "Which of the following best describes the
> kind of grades or marks you get at school?"
>
> A. Excellent grades.
> B. Above Average grades.
> C. Average grades.
> D. Below Average grades.
> E. Very Low grades.

The above responses were linearly transformed on a 5-point scale (assigning 5 points to A, 4 to B, etc., and finally, 1 point to E) in order to facilitate further analyses.

The variables examined in relation to SPA were 28 in all - 18 of the 25 scales, and 10 items as variables of sociological and demographic nature. They are listed in Tables 1.1 and 1.2 (Chapter I).

The scales of the YRS were thoroughly examined contextually with a view to selecting from among them those most suited to this study. It was felt by this researcher that 18 scales (made up of 187 items) in their original form were the most pertinent to the rationale underlying this investigation. Also, on the basis of the relative independence of the scales, and judging purely on the basis of similarity and underlying logic and rationale, (Eysenck, 1953), an attempt was made to re-classify the 18 selected scales in a different way under four broad concepts.

1) Family and Interactional Modes
2) Self-Esteem or Self-Regard
3) Within School Problems
4) Self and Social Interaction

As will be seen later in the chapter, this type of re-grouping is intended to provide an 'a priori' or conceptual framework for testing certain hypotheses related to each of the groups.

The selected 18 scales are described below in some detail under the four broad concepts.

I. Family and Its Interactional Modes

Variable 1. Family Unity: Scale No. 1; 10 Items ; Rel: .89

This scale reflects youths' concern and anxiety over emotional climate within his home - the lack of closeness, cohesiveness, togetherness, and oneness of family members, their lack of understanding and consideration for one another, and the quality of interaction between the parents and children.

Variable 2. Parental Understanding: Scale No. 2; 9 Items; Rel: .88

This scale measures the lack of communication and understanding between a youth and his parents: distress over the feeling that he is being treated like a child, and disappointment in his parents' distrust or rejection of him and his friends.

Variable 3. Family Pressures. Scale No. 3; 7 Items; Rel: .56

The pressures identified in this scale are those which tend to intensify negative reactions in a home. They include such difficulties as divorce, separation, illness, financial problems, tragedy and parent-youth strife. The more difficulties that are identified, the higher the score.

Variable 18. Family Social Concerns. Scale No. 24; 8 Items; Rel: .70

The dimension assessed here is youth's perception of the degree to which his parents and family are responsive to human needs. It gives a fair estimate of the extent to which they are involved in some form of social action or some effort to help others.

II. Self-Esteem or Self-Regard of Youths.

Variable 5. Lack of Self-Confidence. Scale No. 5; 8 Items; Rel: .78

This measure indicates the extent to which a youth feels uncertain about himself and is afraid of making mistakes or exposing himself to ridicule. A high score identifies a person who tends to be self-conscious, uneasy in a group situation, anxious to please others, and over-eager to avoid occasions where he may be embarrassed.

Variable 7. Personal faults. Scale No. 7; 12 Items; Rel: .87

Another source of self-criticism is a youth's awareness of not having lived up to his ideals. As a result, he feels guilty. This scale measures his feeling of self-criticism, both with respect to what he has done and what he has failed to do. It reflects a mode of thinking and feeling about oneself that often undermines one's self-confidence.

Variable 10. Maturity of Values. Scale No. 12; 7 Items; Rel: .61

A maturing person is increasingly able to make his own decisions rather than depend upon the opinion of others. The scale assesses the degree to which one feels in control of his behaviour and able to resist immediate drives and pressures of others. A high score suggests one who believes he can move toward goals that serve as his ideals.

Variable 12. Moral Responsibility. Scale No. 14; 10 Items; Rel: .73

An important attitudinal stance toward life relates to the age-old question: "Am I my brother's keeper?" The items in this scale reflect the extent to which a youth retreats to a privatism where he denies the existence of a moral order or becomes involved in life by accepting a God-given sense of responsibility for others.

Variable 14. Self-Regard. Scale No. 18; 13 Items; Rel: .79

Most youth experience times when they hold a few unfavourable opinions of themselves. When the occasions are prolonged or become frequent, self-confidence or self-esteem is undermined. The self-regard scale measures the degree to which youths accept themselves as persons of worth and promise.

Variable 16. Youth Group Vitality. Scale No. 22: 10 Items; Rel: .80

The measure shows the degree to which a youth is impressed by the climate of acceptance and sense of mission that characterize his youth group - a climate in which he feels at home and can be himself without fear of criticism of being belittled.

Variable 17. Adult Caring. Scale No. 23; 11 Items; Rel: .81

These items relate to youths' perception of the acceptance, care and attention accorded them by adults in their congregations. It also reflects their evaluation of what the congregation is doing in relation to human needs and their manifest concern over current social problems. A low score identifies those who feel negative about what they see in the adults of their congregation.

III. Within School Problems

Variable 6. Academic Problems. Scale No. 6; 9 Items; Rel: .85

This dimension relates to concerns about the academic aspects of school life. The scale assesses the degree to which the respondent is worried about his grades - actual and anticipated, his frustration over not being able to concentrate on school work, and his self-blame over doing poorly or failing.

Variable 8. Classroom Relationships. Scale No. 8; 15 Items; Rel: .87

The scale focusses on the feelings of not being accepted by one's classmates or teachers. It indicates the degree to which a respondent is lonely and feels like an outsider or an unwanted intruder. In the case of girls, high scores are usually associated with feelings of inadequacy. For boys, they are associated with criticism by others. A high concern in this area often indicates a conformity to 'status quo' and a willingness to acquiesce to social power.

IV. Self and Social Interaction

Variable 4. Life Partner. Scale No. 4; 7 Items; Rel: .81

The scale reflects a youth's uncertainty, his anxiety about the possibility of not having a happy marriage. The items also tap the fear of not being wanted or found desirable by person of the opposite sex.

Variable 11. Orientation for change. Scale No. 13; 11 Items; Rel: .75

This scale reflects youth's thinking in the political realm of law inforcement, social welfare, race relations, war reforms, school curricula, and sexual behaviour. It indicates whether one leans toward traditional thinking in these matters or whether one takes a liberal stance that welcomes change.

Variable 13. Meaningful Life. Scale No. 15; 17 Items; Rel: .78

The items here centre in a life style that accords importance to such life goals as serving others, ethical behaviour, wisdom, honesty, giving and receiving love, forgiveness, family happiness and meaningful work.

A low score points to a contrasting life style which is characterized by goals that are hedonistic and self-centred, giving a high priority to having plenty of money, personal power, physical attractiveness, pleasure and excitement, recognition, skill and expertise.

Variable 9. National Issues. Scale No. 9; 11 Items; Rel: .86

The past decade has witnessed a phenomenal rise in concern among youth for what is happening within the nation and the world, especially as it relates to peace and happiness. The scale reflects their fear of pollution, nuclear holocaust, violence, revolution, war, disorder and lawlessness. It also assesses their concern over unjust laws and the seeming unresponsiveness of government to the needs of the people.

Variable 15. Human Relations. Scale No. 19; 12 Items; Rel: .75

The attitudes probed by these items relate to the presence or absence of an open-mindedness, sensitivity and compassion toward those who are often criticized and judged harshly. The reasons or criticisms may be racial (Negroes), religious (Jews), chauvinistic (people of enemy countries), ideological (communists), or the like. A high score implies an understanding of the essential equality of all men before God.

Variable 19. Sex:

The sex of the subject was obtainable from S's Answer Sheet.

It was classified as Male = 1, and Female = 2. The sample sizes were Males = 2961, Females = 3573.

Variable 20. Age

The Answer Sheet provided a column for the subject's age. The classification 15=1; 16=2; 17=3; 18 years = 4. There were 2692, 1746, 1523, and 573 subjects respectively in the four categories.

Variable 21. Socio-Economic Status of Parents

The SES of the parents was known from the responses to Item 195. which runs thus:

> "The occupation of the main wage-earner in my family is ____________________".
>
> A. Profession (doctor, lawyer, teacher, minister, and other professional positions).
> B. Farmer.
> C. Sales - white-collar, business.
> D. Skilled, Unskilled manual work.
> E. Service work (barber, waiter).
> F. None of these.

Based on the U.S. Census (1963), the occupations were re-grouped as A = High (3), B, C, and D = Medium (2), and E, F = Low (1).

Variable 22. Religiosity of Youths

Information about the subject's religiosity was obtained through his response to Item 190 -

"During the past six months I have gone to church, synagogue or temple (or mosque). ---------"

A. Several times a week.
B. About once a week.
C. About every other week.
D. About an average of once a month.
E. Rarely.
F. Not at all.

The responses were coded according to frequencies at prayer houses as follows:

A and B = High or 3

C and D = Medium or 2

E and F = Low or 1.

Variable 23. Denomination - Religious Affiliation of Youths

Religious affiliations were classified as Catholic, Protestant, and Others, for the purpose of this study. The information was obtained from the subjects' response to the following biographical item:

"........ From the list below, choose the denomination of the church where you are a member, or which you attend most regularly, (Mark the number (1-12) in the space).

1. Baptist
2. Episcopal
3. Lutheran
4. Methodist
5. Presbyterian
6. United Church of Canada
7. United Church of Christ
8. Orthodox
9. Roman Catholic
10. Jewish
11. Other
12. I do not attend any church.

The above were reclassified as

Number 9 = Roman Catholic, category 1
Nos. 1-7 = Protestant, category 2
Nos. 8, 10-12, = Others, category 3

The sample sizes were:

1. Catholics = 1858
2. Protestants = 3181
3. Others = 1495

Variable 24. Educational status of Parent/Guardian was obtained from the response to the following questions:

(i) Item 196: "How much education has your father (or male guardian) had?" ....

A. 8 grades or less.
B. Some vocational or high school.
C. Vocational or high school graduate.
D. Some college or university work.
E. College or university graduate.
F. Some graduate training.

(ii) Item 197: "How much education has your mother (or female guardian) had?"..........

A. 8 grades or less.
B. Some vocational or high school.
C. Vocational or high school graduate.
D. Some college or university work.
E. College or university graduate.
F. Some graduate training.

In order to combine the responses for each subject on these two items so as to obtain a single score of standing on this variable, the following procedure was adopted:

Step 1. The responses of A-F were converted to a six-point numerical scale (A = 1, B = 2, ... F = 6.).

Step 2. A frequency distribution was obtained from the following possible sums of scores on both items:

Item 196	1	2	3	4	5	6					
+ Item 197	1	2	3	4	5	6					
	2	3	4	5	6	7					
		3	4	5	6	7	8				
			4	5	6	7	8	9			
				5	6	7	8	9	10		
					6	7	8	9	10	11	
						7	8	9	10	11	12
	low = 1				medium = 2			high = 3			

The sample sizes were as follows:

1. Low = 1536; 2. Medium = 3074; 3. High 1924.

This classification is similar to that suggested by Hollingshead and Redlich (1958).

Variable 25. Drug (including Alcohol) Usage:

Drug Usage was revealed in the response to Item 198*—

"Which statement best describes your use of drugs?"

A. I have not used drugs.
B. I use pot (marijuana) occasionally.
C. I use pot frequently.
D. I use pot frequently and have used acid - L.S.D.
E. I have used speed, either alone or with other drugs.
F. I have used heroin or other hard narcotics.

The recoding was: A and B = Low; C and D = High; E and F = Very High.

Variable 26. Family Unit.

Family Unit is classified here as separated or divorced parents on one hand, 'not so' on the other. This information was ascertained from the response to Item 202 —

"My parents are separated (or divorced)". Yes/No.

In this study the single parent concept also includes youths in the care of widows, widowers or unmarried parents.

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*Confidentiality of the subjects' responses was guaranteed. This was in accordance with the recommendations of the APA -- "Clearance of Questionnaire with Respect to 'Invasion of Privacy', Public Sensitivities and Ethical Standards, etc." (Conrad, 1967).

Variable 27. Type of School Attending

The relevant information was obtained from the response to Item 193 -

"What type of school do you attend?"

A. Public (Gov't).
B. Religiously sponsored (parochial).
C. Private.
D. Vocational or Technical.
E. Others.

The response under D. and E. were put together as others for the purpose of analysis.

Public = 1, Private = 2, Parochial = 3, Others = 4.

Variable 28. Size of Family

Responses of the subjects to Item 214 provided information about size of family. It runs thus:

"I have three or more brothers or sisters" ----- Yes/No

The Designs of the Study

The basic design was factorial. The 28 variables selected for analyses in relation to SPA were grouped according to the number of variables a design contained. They were:

Group I - 2-way: 2.1; 2.2 (2 designs)

Group II - 3-way: 3.1; 3.2 (2 designs)

Group III - 4-way: 4.1; 4.2; 4.3; 4.4; 4.5; 4.6; 4.7; and 4.8 (8 designs)

Thus there were 12 designs as given below.

Design #2.1 Within School Problems

A. (6) Academic Problems
B. (8) Classroom Relationship

Design #2.2 Self and Social Interaction (Part ii)

A. (13) Meaningful Life
B. (15) Human Relations

Design #3.1 Self Esteem or Self Regard (Part ii)

A. (12) Moral Responsibility
B. (16) Youth Group Vitality
C. (17) Adult Caring

Design #3.2 Self and Social Interaction (Part i)

A. (4) Life Partner
B. (9) National Issues
C. (11) Orientation for Change

Design #4.1 Family and Its Interactional Modes.

A. (1) Family Unity
B. (2) Parental Understanding
C. (3) Family Pressures
D. (18) Family Social Concerns

Design #4.2 Self Esteem or Self Regard (Part i)

(i) A. (5) Lack of Self Confidence:

B. (7) Personal Faults:

C. (10) Maturity of Values:

D. (14) Self Regard:

Design #4.3 Biographical Variables

A. (195) Socio-Economic Status of Parents: Low, Medium, High.

B. Sex: Male, Female.

C. Age: 15, 16, 17, 18.

D. (196/197) Parents/Guardians Educational Status: Low, Medium High.

Design #4.4

A. (195) Socio-Economic Status of Parents: Low, Medium, High.

B. (202) Family Unit: Spearated, Unseparated.

C. (196/197) Parent's/Guardian - Education: Low, Medium, High.

D. (204) Size of Family: 3 and more, Less than 3.

Design #4.5

A. (190) Religiosity of Youths: Low, Medium, High.

B. (195) Socio-Economic Status of Parents: Low, Medium, High.

C. (Denomination) Religious Affiliation: Catholics, Protestants, Others.

D. Parent's/Guardians - Education: Low, Medium, High.

Design #4.6

A. (195) Socio-Economic Status of Parents: Low, Medium, High.

B. (202) Family Unit: Separated, Unseparated.

C. (198) Drug (including Alcohol) Usage: Low, Medium, High.

D. (214) Size of Family: 3 and more, Less than 3.

Design #4.7

A. (193) Type of School Attending: Public, Private, Parochial, Others.

B. (195) Socio-Economic Status of Parents: Low, Medium, High.

C. (196/197) Parent's/Guardian's Educational Status: Low, Medium, High.

D. (214) Size of Family: 3 and more children, Less than 3.

Design #4.8

A. (190) Religiosity of Youths: Low, Medium, High.

B. (193) Type of School Attending: Public, Private, Parochial, Others.

C. (198) Drug (including Alcohol) Usage: Low, Medium, High.

D. (Denomination) Religious Affiliation: Catholic, Protestants, Others.

It would be oberved in Table 3.4 showing the summary that for example, Religiosity, Religious Affiliation, Drug Usage and Family Unit and Type of School Attending appeared twice; Size of Family, thrice; Parents or Guardian's Education, four times, and SES five times. This made it possible to examine certain interactions hypothesized in Chapter II.

The lay-out of the data in the most complex design, that is, four-factor is illustrated below as it is in Design #4.1 - Family and Interactional Modes.

Variables A. Family Unity.
B. Parental Understanding.
C. Family Pressures.
D. Family Social Concerns.

The scores on the 18 scales were classified as follows:

Level	T-Score	Label
High	56 and over	a_1, b_1, c_1, d_1
Medium	46 — 55	a_2, b_2, c_2, d_2
Low	45 and less	a_3, b_3, c_3, d_3

Each of the 10 biographical and demographic variables had two, three or four levels.

In this design, there were FOUR FACTORS, each with three levels. The entries in the cells were the SPA's of the subjects belonging to the various classifications.

TABLE 3.4

SUMMARY OF BIOGRAPHICAL VARIABLES INCLUDED IN THE DESIGNS.

	DESIGNS						
Variables	4.3	4.4	4.5	4.6	4.7	4.8	Frequency
1. Sex	x						1
2. Age	x						1
3. Socio-Economic Status (of parents)	x	x	x	x	x		5
4. Religiosity			x			x	2
5. Religious Affiliation			x			x	2
6. Parents/Guardians Education	x	x	x			x	4
7. Drug Usage				x		x	2
8. Family Unit		x		x			2
9. Type of School Attending					x	x	2
10. Size of Family		x		x	x		3

The layout is as follows:

DESIGN 4.1

FAMILY AND ITS INTERACTIONAL MODES

		A =	a_1			a_2			a_3		
		B =	b_1	b	b_3	b	b_2	b_3	b_1	b_2	b_3
D =	d_1	C = c_1									
		c_2									
		c_3									
	d_2	c_1									
		c_2									
		c_3									
	d_3	c_1									
		c_2									
		c_3									

The sample size was 6534

Analyses of Data

The data in the various factorial designs were analysed, assuming that all the designs had fixed classifications. Because of unequal within cell samples, unweighted means approach was adopted. In the various designs, it was considered desirable to test simple main effects and first order interactions only. Higher order interactions were not examined.

SUMMARY OF ANALYSIS OF VARIANCE (4 FACTOR COMPLETELY CROSSED-FIXED DES.) FOR INCOMPLETE ANALYSES, EACH FACTOR HAVING THREE LEVELS.

Source of Variation	d.f.	Deviation Sum of Squares
A main effect	A-1 = 2	SS_a
B main effect	B-1 = 2	SS_b
C main effect	C-1 = 2	SS_c
D main effect	D-1 = 2	SS_d
A x B Interaction	(A-1)(B-1) = 4	SS_{ab}
A x C Interaction	(A-1)(C-1) = 4	SS_{ac}
A x D Interaction	(A-1)(D-1) = 4	SS_{ad}
B x C Interaction	(B-1)(C-1) = 4	SS_{bc}
B x D Interaction	(B-1)(D-1) = 4	SS_{bd}
C x D Interaction	(C-1)(D-1) = 4	SS_{cd}
Error	ABCD $(\bar{n}_h-1) = 6501$	SS_{Error}
TOTAL	N - 1 = 6533	SS_{Total}

EXPECTED MEAN SQUARE: E(MS)

(Incomplete)

MS_a	$\sigma_\varepsilon^2 + {}^*n \quad \sigma_\alpha^2$
MS_b	$\sigma_\varepsilon^2 + n \quad \sigma_\beta^2$
MS_c	$\sigma_\varepsilon^2 + n \quad \sigma_\gamma^2$
MS_d	$\sigma_\varepsilon^2 + n \quad \sigma_\delta^2$
MS_{ab}	$\sigma_\varepsilon^2 + n \quad \sigma_{\alpha\beta}^2$
MS_{ac}	$\sigma_\varepsilon^2 + n \quad \sigma_{\alpha\gamma}^2$
MS_{ad}	$\sigma_\varepsilon^2 + n \quad \alpha_{\alpha\delta}^2$
MS_{bc}	$\sigma_\varepsilon^2 + n \quad \sigma_{\beta\gamma}^2$
MS_{bd}	$\sigma_\varepsilon^2 + n \quad \alpha_{\beta\delta}^2$
MS_{cd}	$\sigma_\varepsilon^2 + n \quad \alpha_{\gamma\delta}^2$
MS_{error}	σ_ε^2

$^*n$ denoted $\bar{n}_h$ (not n_{ij}).

Two and Three-factor designs:

The designs for the two and three factors were obtained by modifying the 4-factor design appropriately.

Unweighted means analysis:

In a factorial design, unequal cell frequencies are a natural phenomenon. Unweighted means analysis was, therefore, needed to be used.

The rationale behind it was to seek a way of equalizing the n's in each cell for the purpose of analyses of (main and interaction) effects. Instead of using the arithmetic mean of all frequencies ($\bar{n}_{ij}$ in 2 factors, $\bar{n}_{ijk}$ in 3 factors, and $\bar{n}_{ijkm}$ in 4 factor designs), the unweighted means analysis used the harmonic means ($\bar{n}_h$) to represent the frequency of each cell. The harmonic mean was said to be the summed reciprocals of all means. The standard error of a mean is proportional to $1/n_{ij}$ rather than n_{ij}. (Winer, 1971, pp. 402-404; Glass and Stanley, 1970).

The harmonic means for the various designs were:

(i) For 2 factors of 3 levels each:

$$\bar{n}_h = \sum_{i=1}^{3} \sum_{j=1}^{3} \frac{1}{n_{ij}} \quad .$$

(ii) For 3 factors of 3 levels each:

$$\bar{n}_h = \sum_{i=1}^{3} \sum_{j=1}^{3} \sum_{k=1}^{3} \frac{1}{n_{ijk}} .$$

(iii) For 4 factors of 3 levels each:

$$\bar{n}_h = \sum_{i=1}^{3} \sum_{j=1}^{3} \sum_{k=1}^{3} \sum_{m=1}^{3} \frac{1}{n_{ijkm}} .$$

In (i) for instance, the means for each of the cells may be represented as follows:

	b_1	b_2	b_3
a_1	$\overline{AB}_{11}$	$\overline{AB}_{12}$	$\overline{AB}_{13}$
a_2	$\overline{AB}_{21}$	$\overline{AB}_{22}$	$\overline{AB}_{23}$
a_3	$\overline{AB}_{31}$	$\overline{AB}_{32}$	$\overline{AB}_{33}$

The following form for equal cell means does not apply in this study which has unequal cell means:

	b_1	b_2	b_3
a_1	n_{11}	n_{12}	n_{13}
a_2	n_{21}	n_{22}	n_{23}
a_3	n_{31}	n_{32}	n_{33}

The harmonic means for 2-factors were derived on the same principles as those for 3 and 4 factor designs.

CHAPTER IV

HYPOTHESES, ANALYSES OF DATA, RESULTS, AND DISCUSSION

It was stated in Chapter III that the principal analytic procedure used in this research was ANALYSIS OF VARIANCE (ANOVA). All the designs were fixed and had cross classification. Some designs contained two factors, others three, but most of them contained four.

The basic assumptions associated with factorial designs are widely known (Box, 1953; Lubin, 1961; Hayes, 1963; Downie and Heath, 1965; Glass and Stanley, 1970; Sharma, 1970; and Winer, 1971), and, therefore, are not given here.

It would be recalled that only the first order interactions which were supposed to produce more conservative results of F's, were planned to be examined here. The higher order interactions did not seem to be of interest and, as such, their effects were included in the error term. This would be clear from the following models applied in analyses:

(i) Structural Model for 2-Factor Designs:

$$X_{ijn} = \mu + \alpha_i + \beta_j + \alpha\beta_{ij} + \varepsilon_{ijn}$$

Where,

μ: the overall population mean.

α_i: the effect due to level i of the first factor.

β_j: the effect due to level j of the second factor.

$\alpha\beta_{ij}$: the interaction between factors A and B at levels i and j respectively.

ε_{ijn}: the residual or the error for the ijnth observation.

(ii) (Incomplete) Structural Model for 3-Factor Designs:

$$X_{ijkn} = \mu + \alpha_i + \beta_j + \gamma_k + \alpha\beta_{ij} + \alpha\gamma_{ik} + \beta\gamma_{jk} + \varepsilon_{ijkn}.$$

Where,

μ, α_i, β_j, and $\alpha\beta_{ij}$ have the meanings given in (i) above.

γ_k : the effect due to level k of the third factor.

$\alpha\gamma_{ik}$: the interaction between the first and the third factors at levels i and j respectively.

$\beta\gamma_{jk}$: the interaction between the second and the third factors at levels j and k respectively.

ε_{ijkn}: the residual or error for the ijknth observation, including the effects due to the second order interaction, $\alpha\beta\gamma_{ijk}$.

(iii) (Incomplete) Structural Model for 4-Factor Designs

$$X_{ijkmn} = \mu + \alpha_i + \beta_j + \gamma_k + \delta_m + \alpha\beta_{ij} + \alpha\gamma_{ik} + \alpha\delta_{im} + \beta\gamma_{jk} + \beta\delta_{jm} + \gamma\delta_{km} + \varepsilon_{ijkmn}.$$

Where,

μ, α_i, β_j, γ_k, $\alpha\beta_{ij}$, $\alpha\gamma_{ik}$, $\beta\gamma_{jk}$ have the meanings given in (i) and (ii) above.

δ_m: the effect due to level m of the fourth factor.

$\alpha\delta_{im}$: the interaction between the first and the fourth factors at levels i and m respectively.

$\beta\delta_{jm}$: the interaction between the second and the fourth factors at levels j and m respectively.

$\gamma\delta_{km}$: the interaction between the third and the fourth factors at levels k and m respectively.

ε_{ijkmn}: the residual or error for the ijkmnth observation, including the effects due to higher order interactions — $\alpha\beta\gamma_{ijk}$, $\alpha\beta\delta_{ijm}$, $\alpha\gamma\delta_{ikm}$, $\beta\gamma\delta_{jkm}$, and $\alpha\beta\gamma\delta_{ijkm}$.

In examining the various hypotheses, the levels of significance used were .05 to indicate 'significant', and .01 'highly significant' differences.

Contrasts were examined, using Sheffe's method about which Winer (1971, p. 201) commented as follows:

> The Scheffe method is clearly the most conservative with respect to Type I error; this method will lead to the smallest number of significant differences. In making tests on differences between all possible pairs of means, it will yield too few significant results.

General procedure for examining the outcomes from the Factorial Designs

(1) All the possible first order interactions in a design were examined first, taken one at a time. An interaction could be non-

significant or significant.

(2) If the first order interaction under examination was not significant, the results related to the overall main effects for the two non-interacting factors were interpreted. In the case of a significant overall main effect, Scheffe's contrasts were set up, examined, and the results interpreted.

(3) If the first order interaction under examination turned out to be significant, the results related to the two overall factors were considered to be meaningless and, therefore, simple main effects were examined as follows: the simple main effects for all the levels of the first factor (A) were examined taking each level of the second factor (B), and vice versa.

Whenever the F for a simple main effect was significant, Scheffe's contrasts were examined, provided the factor had more than two levels.

The data were analysed, using IBM 360, Model 67 system at the University of Alberta. Appropriate DERS (Division of Educational Research Services) programmes were used, e.g. the Datran, Nybmul, and ANOVA 15 and 35, with necessary modifications.

The general procedure is presented schematically in Figure 4.1.

The results from the factorial designs are presented first. They are followed by a listing of correlations of SPA with each of the 28 independent variables under study.

The results are grouped according to the factors within each design and serially numbered as follows:

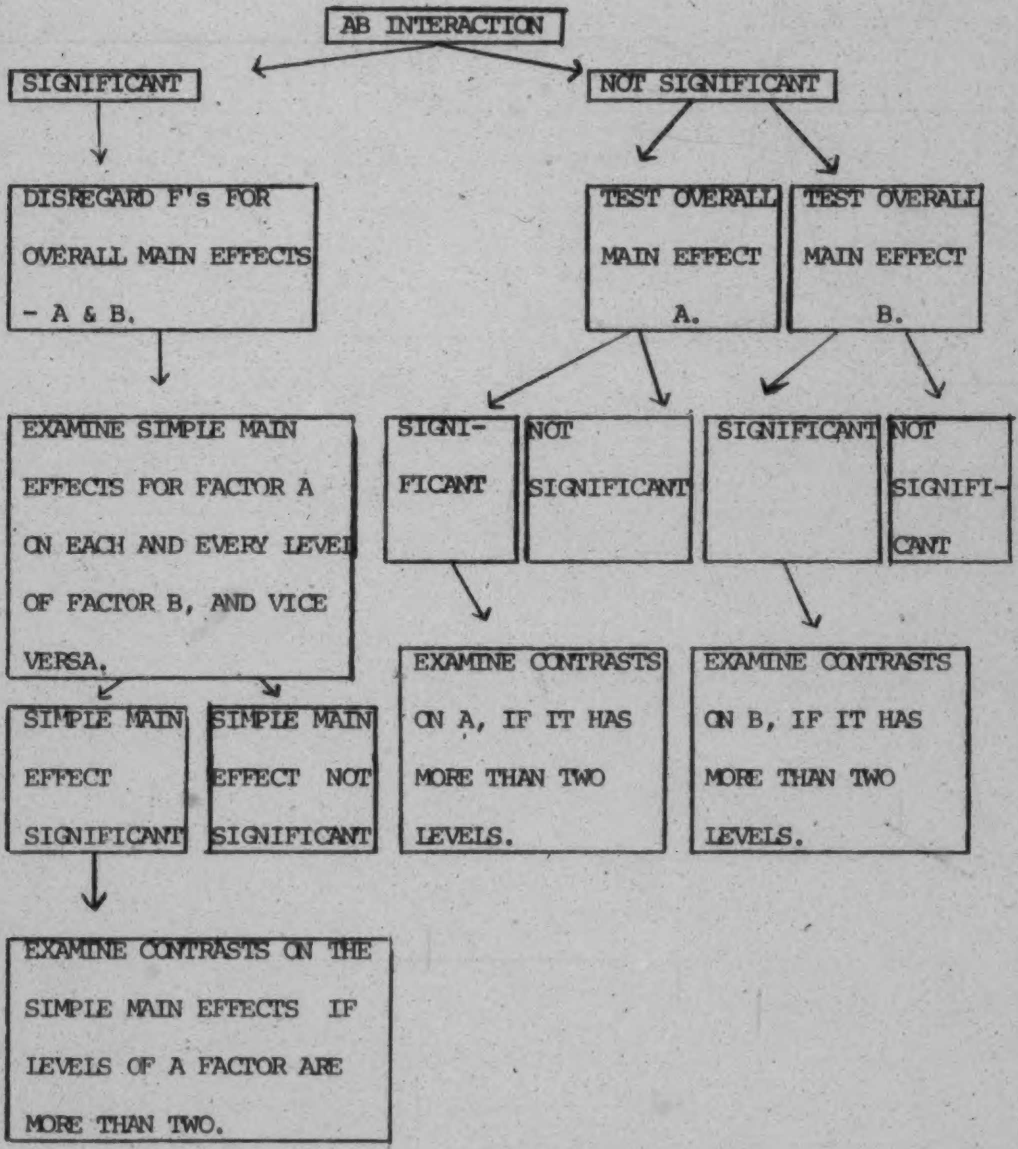
AB INTERACTION
SIGNIFICANT
NOT SIGNIFICANT
DISREGARD F's FOR OVERALL MAIN EFFECTS - A & B.
TEST OVERALL MAIN EFFECT A.
TEST OVERALL MAIN EFFECT B.
EXAMINE SIMPLE MAIN EFFECTS FOR FACTOR A ON EACH AND EVERY LEVEL OF FACTOR B, AND VICE VERSA.
SIGNI-FICANT
NOT SIGNIFICANT
SIGNIFICANT
NOT SIGNIFI-CANT
SIMPLE MAIN EFFECT SIGNIFICANT
SIMPLE MAIN EFFECT NOT SIGNIFICANT
EXAMINE CONTRASTS ON A, IF IT HAS MORE THAN TWO LEVELS.
EXAMINE CONTRASTS ON B, IF IT HAS MORE THAN TWO LEVELS.
EXAMINE CONTRASTS ON THE SIMPLE MAIN EFFECTS IF LEVELS OF A FACTOR ARE MORE THAN TWO.

FIGURE 4.1. SCHEMATIC REPRESENTATION OF THE PROCEDURE USED FOR EXAMINING TWO FACTORS AND THEIR INTERACTION.

A Guide for Interpreting the Various Levels of the 18 Variables in the Following Six Designs.

Desgin #2.1

A. (6) Academic Problems:

Low - Little worries and frustration over grades are experienced.

High - A lot of worries and frustrations over grades.

B. (8) Classroom Relationship

Low - A feeling of adequacy and wantedness.

High - A feeling of inadequacy and unwantedness.

Design #2.2

A. (13) Meaningful Life

Low - A contrasting life style of self-centredness.

High - Having a life's goal of serving others.

B. (15) Human Relations

Low - Absence of openmindedness and compassion for others. Feels that all men are not equal before God.

High - Presence of openmindedness and compassion for others. Believes that all men are equal before God.

Design #3.1.

A. (12) Moral Responsibility

Low - Living for one's self (privatism).

High - Having responsibility for others.

B. (16) Youth Group Vitality

Low - A feeling of unacceptance in group.

High – A feeling of acceptance in a group, and a sense of mission.

C. (17) Adult Caring.

Low – A negative feeling about adult behaviour to youths in congregation.

High – A positive feeling about adult behaviour to youths in congregations.

Design #3.2

A. (4) Life Partner

Low – A feeling of certainty about future happy marriage.

High – A feeling of uncertainty about future happy marriage.

B. (9) National Issues

Low – Low interest, and lukewarmness in social problems.

High – Much interest in identifying with social problems.

C. (11) Orientation for Change

Low – More inclined to traditional thinking.

High – Takes a liberal stance to change.

Design #4.1

A. (1) Family Unity

Low – Less anxiety over family closeness.

High – Much anxiety over lack of family closeness.

B. (2) Parental Understanding

Low – Presence of communication between youth and parents.

High – Extreme lack of communication between youth and parents.

C. (3) Family Pressure

Low - Very few family difficulties.

High - Many family difficulties.

D. (18) Family Social Concern

Low - Less family involvement in human needs.

High - Much family involvement in human needs.

Design #4.2

A. (5) Lack of Self Confidence

Low - Youth has much self-confidence.

High - Youth has little self-confidence.

B. (7) Personal Faults

Low - Little feeling of self-criticism, and guilt.

High - Extreme feeling of self-criticism, and guilt.

C. (10) Maturity of Values

Low - Youth cannot move toward achieving a goal.

High - Youth believes in setting, and moving toward a goal.

D. (14) Self Regard

Low - Youth does not accept himself as a person of worth.

High - Youth has little self-confidence.

1. Group I: 2-Factor Designs

Design # 2.1.

Variables - A (6)*	Academic Problems.
B (8)	Classroom Relations

Design # 2.2.

Variables - A (13)	Meaningful Life
B (15)	Human Relations

2. Group II: 3-Factor Designs:

Design # 3.1.

Variables - A (12)	Moral Responsibility
B (16)	Youth Group Vitablity
C (17)	Adult Caring

Design # 3.2.

Variables - A (4)	Life Partner
B (9)	Orientation for Change
C (11)	National Issues

3. Group III: 4-Factor Designs:

Design # 4.1.

Variables - A (1)	Family Unit
B (2)	Parental Understanding
C (3)	Family Pressure
D (18)	Family Social Concerns

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* The variable numbers within the parentheses.

Design # 4.2.

Variables -	A (5)	Lack of Self-Confidence
	B (7)	Self-Regard
	C (10)	Personal Faults
	D (14)	Maturity of Values

Design # 4.3.

Variables -	A (195)	Socio-Economic Status of Parents
	B (Sex)	Sex
	C (Age)	Age
	D (196/197)	Parent's/Guardian's Educational Status

Design # 4.4.

Variables -	A (195)	Socio-Economic Status of Parents
	B (202)	Family Unit
	C (196/197)	Parent's/Guardian's Educational Status
	D (214)	Size of Family

Design # 4.5.

Variables -	A (190)	Religiosity of Youths
	B (195)	Socio-Economic Status of Parents
	C (DENOMINATION)	Religious Affiliation
	D (196/197)	Parent's/Guardian's Educational Status

Design # 4.6.

Variables -	A (195)	Socio-Economic Status of Parents
	B (202)	Family Unit
	C (198)	Drug (including Alcohol) Usage
	D (214)	Size of Family

Design # 4.7.

Variables -	A (193)	Type of School Attending
	B (195)	Socio-Economic Status of Parents
	C (196/197)	Parent's/Guardian's Educational Status
	D (214)	Size of Family

Design # 4.8.

Variables -	A (190)	Reliogiosity of Youths
	B (193)	Type of School Attending
	C (198)	Drug (including Alcohol) Usage
	D (DENOMINATION)	Religious Affiliation

DESIGN #2.1.

There were two factors in this design, both related to WITHIN SCHOOL PROBLEMS, namely:

A (6) Academic Problems, and B (8) Classroom Relationship.

Academic Problems reflect the degree to which the youngster is worried about his academic progress. Its items include self-blame, self-pity, and self-criticism about his academic achievement. High scores mean a lot of concern and anxiety. Similarly, Classroom Relationship indicated loneliness, unwantedness, inadequacy, and anxiety about satisfying others, with high scores meaning high degree of concern about such inadequacies.

The results (Table 4.1) showed a highly significant interaction between these two factors as it was expected. The effects due to

TABLE 4.1

ANOVA FOR DESIGN #2.1.

Source of Variation	Sum of Squares	df	Mean Square	F(observed)
A. Academic Problems	802.235	2	401.117	616.93**
B. Classroom Relationship	76.509	2	38.255	58.84**
AB. Interaction	9.419	4	2.355	3.62**
Error	4242.420	6525	0.650	

the two factors were non-additive. The six possible main effects were examined. Each of them was found to be highly significant as shown in Table 4.2. Also, all but one of the eighteen contrasts were significant, fourteen of them at level .01. The only non-significant contrast was that between the medium and high levels of Academic Problems when the level of classroom relationship was high : $B_{2-3}(A_3)$.

In the different combinations of levels of the two factors (Table 4.3) which are also presented in Figure 4.2, low on Academic Problems and high on Classroom Relationship indicated the lowest SPA scores. On the contrary, the highest SPA was observed for the combination: 'high' on Academic Problems and 'low' on Classroom Relationship.

The result suggests that youngsters who are experiencing low Classroom Relationship, as well as high Academic Problems are faced with a repulsive situation from which they want to get out quickly. Consequently, they no longer desire to remain in it to work harder. They perceive and feel whatever grades they make as acceptable, and probably are waiting to drop-out of the scene.

Youngsters who experience high Academic Problems as well as low Classroom Relationship seem to undergo tension and are, therefore, most susceptible to maladjustments in the school (Snyder, 1947; Davidson and Lang, 1960; and Bonney, 1946). It is conceivable, therefore, that whenever youngsters are undergoing such classroom strains and stresses, they would rationally perceive and feel differently, not only about their achievements but also about the people and the whole world around them.

TABLE 4.2

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND B IN DESIGN #2.1.

A: ACADEMIC PROBLEMS		B: CLASSROOM RELATIONSHIPS	
Levels	Result	Levels	Results
A_i (B_1)	**	B_j (A_1)	**
$A_1 \sim A_2$	**	$B_1 \sim B_2$	**
$A_1 \sim A_3$	**	$B_1 \sim B_3$	**
$A_2 \sim A_3$	**	$B_2 \sim B_3$	*
A_i (B_2)	**	B_j (A_2)	**
$A_1 \sim A_2$	**	$B_1 \sim B_2$	**
$A_1 \sim A_3$	**	$B_1 \sim B_3$	**
$A_2 \sim A_3$	**	$B_2 \sim B_3$	*
A_i (B_3)	**	B_j (A_3)	**
$A_1 \sim A_2$	**	$B_1 \sim B_2$	*
$A_1 \sim A_3$	**	$B_1 \sim B_3$	**
$A_2 \sim A_3$	**	$B_2 \sim B_3$	N.S.

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

TABLE 4.3

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND B.

		A: #6: ACADEMIC PROBLEMS.			
		1. Low	2. Medium	3. High	
B: #8: CLASSROOM RELATIONSHIP	1.Low	$\bar{X}$ = 2.209	2.621	3.078	2.459
		N = 1253	702	322	2277
	2.Medium	$\bar{X}$ = 1.922	2.472	2.912	2.420
		N = 703	870	616	2189
	3.High	$\bar{X}$ = 1.784	2.368	2.875	2.523
		N = 338	709	1021	1959
		N = 2294	2281	1959	= 6534
		$\bar{X}$ = 2.058	2.486	2.920	

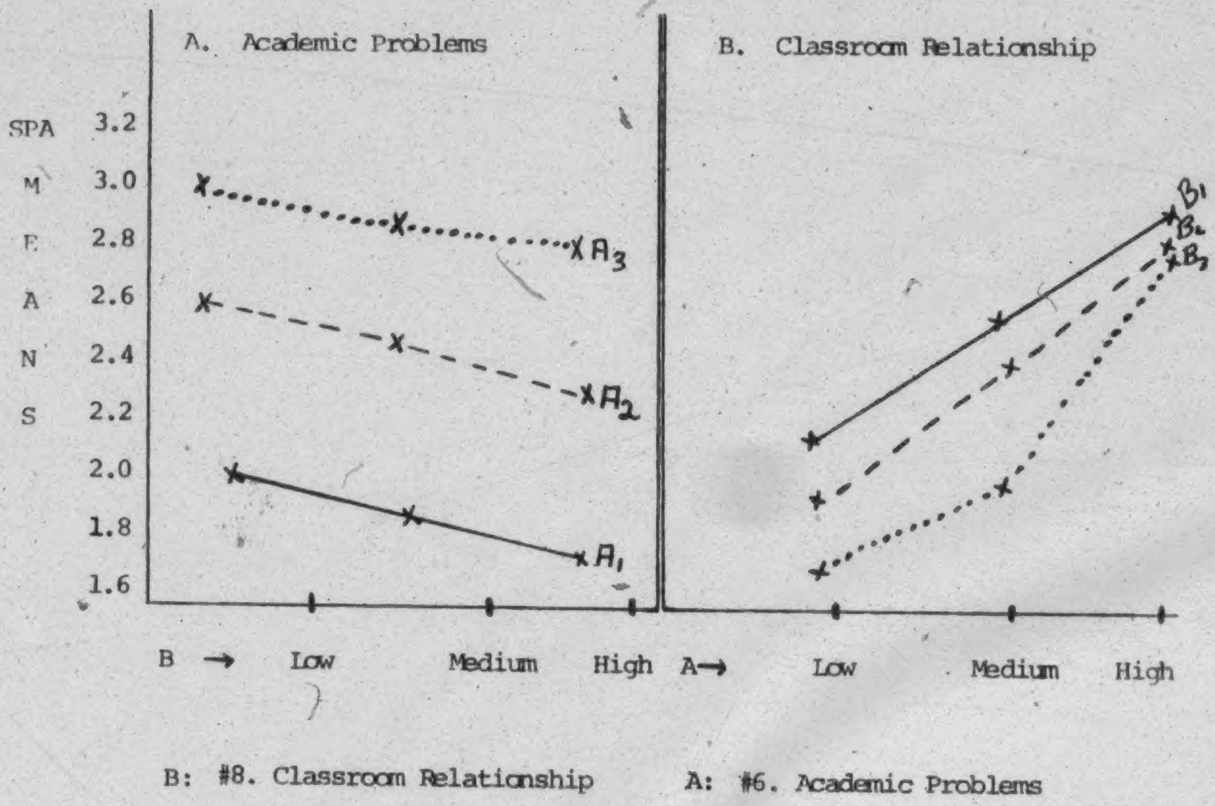

FIGURE 4.2: SPA FOR DIFFERENT COMBINATIONS OF LEVELS OF A AND B.

It was illustrative (Table 4.3) that high Academic Problems is a very serious factor. Whenever this factor combined with any level of Classroom Relations, it considerably showed a higher value of SPA. Similarly low Classroom Relationship showed the same value on SPA. High Classroom Relationship was associated with lowerSPA scores in each level of Academic Problems.

The implication in the school situation is that some of the Academic Problems (Davidson and Lang, 1960; Snyder, 1947; Soar, 1968) are created by teachers or by the school itself (Hargreaves, 1967; Hanson, 1967; Kelly, 1971), while others are due to the students' attitude and ability. Classroom Relationship in some cases can be made difficult either by peers (Bonney, 1946; Echelberger, 1959; Coleman, 1960) or by the youngster himself (Rhodes and Reiss, 1969; Schafer & Polk,1968;Stinchcombe,1964). In each case, however it calls for teachers and counsellors to aim at creating favourable atmosphere for students to learn, and also to enhance relationships with peers and teachers for sound mental health.

It may be argued that some pleasant and unpleasant experiences are condiments for wholesome personality growth; but when unpleasant experiences are prolonged, they could lead to self-hate and frustration. Other highlights of the effects to be guarded against are for example, low Academic Problems and high Classroom Relationship which showed very low SPA scores.

DESIGN #2.2

The two factors in this design pertained to SELF AND SOCIAL INTERACTION (Part ii). They were:

A (13) Meaningful Life
B (15) Human Relations.

A. Meaningful Life

Scores on this factor reflect the life style of the youngster, how he cherishes the ideal of serving others, strives for ethical behaviour, wisdom, honesty, and sharing love and sympathy with others. Low scorers are typified as self-centred individuals, seeking wealth and honour for themselves alone. High scorers are the opposite.

The interaction between Meaningful Life and Human Relations was not significant (Table 4.4). This means that the effect due to these two factors are additive so that they can be considered independently of one another.

Both variables mentioned above showed highly significant overall main effects. All the six possible contrasts (three in each variable) gave significant F's.

The trend in both factors is the same. That is, when their levels increased, SPA lowered consistently. The three possible contrasts for the levels of Meaningful Life were significant, two being highly significant. The same held true for the three possible contrasts for Human Relations (Table 4.5).

As indicated in Table 4.5, youngsters with low scores on Meaningful Life had high SPA, and vice versa. The results tend to suggest that youngsters who pre-eminently consider service to others over and above their personal considerations could be adversely

TABLE 4.4

ANOVA FOR DESIGN #2.2.

Source of Variation	Sums of Squares	df	Mean Square	f(obs).
A: Meaningful Life	60.608	2	30.304	41.80**
B: Human Relations	252.410	2	126.205	174.07**
AB: Interaction	1.975	4	0.494	.681
Error	4730.890	6525	0.725	

TABLE 4.5

MEANS AND SAMPLE SIZES AT DIFFERENT LEVELS OF FACTORS A AND B SEPARATELY.

Variable		1. Low	2. Medium	3. High	Results of Contrasts
A (13) Meaningful Life	$\bar{X}$ =	2.621	2.491	2.267	Low~Medium* Low~High**
	N =	2246	2255	2033	Medium~High**
B (15) Human Relations	$\bar{X}$ =	2.726	2.476	2.158	Low~Medium** Low~High**
	N =	2249	2241	2044	Medium~High**

affected in trying to meet the expectations and satisfaction of others. In so doing, their own self-acceptance could become secondary hence their lower SPA. Consequently, the result is probably, a feeling and perception of their own achievement as being unsatisfying, whatever the grades.

A persistent state of low SPA could sometimes give rise to maladjustment and mental ill health. It would be the duty of the school Counsellor to assist such younsters. Meaningful Life is a necessity in educational practice, but youngsters should be encouraged to develop self-acceptance and self-awareness to enable them to perceive their achievements realistically.

B. Human Relations

Human Relations is an important factor in self and social interaction. This factor is about presence or absence of an openmindedness, sensitivity to people who are often criticized harshly, such as, on the basis of race (Negroes), religion (Jews), chauvinism (people of enemy country), ideology (Communism), and the like. A high score is associated with an understanding that all men are entitled to equality before God.

Low scores on Human Relations (Table 4.5) are associated with high SPA. The result thus suggests that youngsters with low Human Relations tend to perceive their achievements as more satisfying than those with medium and also high. Since high scores on Human Relations distinguish individuals who are mostly concerned with the rights and demands of others, it is conceivable that such external pressures could be reflected in the youngster's perception. Whenever the youngster struggles to satisfy an extraneous body, he tends to perceive his achievement as unsatifying, hence the lower SPA.

Group II: 3 Factor Designs

There were two 3-Factor designs in this group (3.1 and 3.2). The results thereof are given below:

Design #3.1

The three factors in this design were related to SELF ESTEEM OR SELF REGARD (Part II). They were:

A (12) Moral Responsibility
B (16) Youth Group Vitality
C (17) Adult Caring

As Table 4.6 shows, five of the six null hypotheses examined here were accepted. Even though AB interaction was expected to be significant, it did not turn out to be so.

The rejected null hypothesis related to (A) Moral Responsibility which produced a highly significant F. The implication of scores on Moral Responsibility is the degree to which the youngster resorts to privatism (minding himself alone), or to how much he can maintain the ideology of becoming involved in helping others. Low scores are associated with privatism.

In the possible contrasts examined (Table 4.7), each pair

TABLE 4.6

ANOVA FOR DESIGN #3.1

Source of Variation	Sums of Squares	df	Mean Square	F(obs).
A. Moral Responsibility	106.735	2	53.367	69.78*
B. Youth Group Vitality	2.159	2	1.079	1.41
AB. Interaction	1.329	4	0.332	0.43
C. Adult Caring	1.474	2	0.737	0.96
BC. Interaction	4.327	4	1.082	0.41
AC. Interaction	1.117	4	0.279	0.36
Error	4983.975	6515	0.765	

TABLE 4.7

MEANS AND SAMPLE SIZES OF DIFFERENT LEVELS OF FACTOR A: MORAL RESPONSIBILITY

Variable		1. Low	2. Medium	3. High	Results of Contrasts
(12) A: Moral Responsibility	$\bar{X}$ =	2.636	2.412	2.284	Low~Medium** Low~High** Medium~High**
	N =	2518	2374	1642	

show highly significant differences in SPA scores. This trend typifies youngsters with increasing scores on Moral Responsibility as showing lower SPA. In schools, youngsters who had high scores on Moral Responsibility are those who are mostly out to help others, hence they perceive their achievement as low and unsatisfying. The tendency for youngsters to satisfy others mostly, while at the same time ignoring their own satisfaction, could ultimately develop into a state of anxiety and tension which may end up in mental ill health.

Design #3.2

This design contained three factors concerned with SELF AND SOCIAL INTERACTION (Part I). They were:

A. (4) Life Partner

B. (9) National Issues

C. (11) Orientation for Change

Two of the six null hypotheses examined gave significant F's and were, therefore, rejected (Table 4.8). They were BC interaction, and the overall main effect due to C. The former made it necessary to examine simple main effects for B and C. The results are given in Table 4.9.

The interaction between (B) National Issues and (C) Orientation for Change.

Scores on National Issues relate to awareness of those conditions likely to produce peace and happiness, violence, pollution, and other social phenomena. Low scores reflect lukewarmness of the youngster

TABLE 4.8

ANOVA FOR DESIGN #3.2.

Source of Variation	Sums of Squares	df	Mean Square	F(observed)
A. Life Partner	4.285	2	2.123	2.74
B. National Issues	1.753	2	0.877	1.12
AB. Interaction	0.860	4	0.215	0.27
C. Orientation for Change	9.812	2	4.906	6.27**
BC. Interaction	9.826	4	2.457	3.14*
AC. Interaction	1.556	4	0.389	0.50
Error	5094.730	6515	0.782	

TABLE 4.9

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF FACTORS B AND C IN DESIGN #3.2.

B: NATIONAL ISSUES		C: ORIENTATION FOR CHANGE	
Levels	Results	Levels	Results
B_j (C_1)	*	C_k (B_1)	**
$B_1 \sim B_2$	N.S.	$C_1 \sim C_2$	**
$B_1 \sim B_3$	N.S.	$C_1 \sim C_3$	**
$B_2 \sim B_3$	N.S.	$C_2 \sim C_3$	N.S.
B_j (C_2)	N.S.	C_k (B_2)	N.S.
B_j (C_3)	*		
$B_1 \sim B_2$	N.S.	C_k (B_3)	N.S.
$B_1 \sim B_3$	*		
$B_2 \sim B_3$	N.S.		

Note: *Probability of $F \leq .05$, but $> .01$
**Probability of $F \leq .01$.

towards such concerns, and high scores reflect high concern. In Orientation for Change, high scores indicate the desire for changes in such things as curricula, war, social welfare, race relations, and school regulations. Low scores are identified with traditional thinking and unpreparedness to welcome changes. Two of the six simple main effects were found to be significant and one of them being highly significant. Among the nine contrasts on simple main effects examined (3 for each significant or highly significant simple main effect) only three were significant and six were not.

The general trend observed from Table 4.10 was somewhat inconsistent. SPA scores, for example, at both low and medium Orientation for Change, as well as high National Issues illustrate the point. But increasing trend in SPA scores was observed in Orientation for Change only at the low and medium levels of National Issues. Also, at high Orientation for Change SPA scores showed a decreasing trend from low to high in National Issues scores.

Even though the F for National Issues (B) at low level of Orientation for Change was significant, $B_j(C_3)$, only one of its three possible contrasts was significant. This was probably because the significant F was marginal as a result of the conservative Scheffé F test applied. Orientation for Change did not show significant differences in SPA scores at the medium and high levels but highly significant differences in SPA scores were observed at low and medium, and low and high levels.

It could be deduced from the results that growth in awareness for change in National Issues could lead to significantly higher SPA scores for youngsters. Similarly, low scores on both factors would tend to show

TABLE 4.10

MEANS AND SAMPLE SIZES AT DIFFERENT COMBINATIONS OF LEVELS OF FACTORS B AND C.

B: #9: NATIONAL ISSUES

		1. Low	2. Medium	3. High	
C: #11 Orientation for Change	1.Low	$\bar{X}$ = 2.373	2.464	2.438	X = 2.413
		N = 1245	761	516	N = 2522
	2.Medium	$\bar{X}$ = 2.525	2.476	2.494	X = 2.500
		N = 964	827	625	N = 2416
	3.High	$\bar{X}$ = 2.608	2.517	2.440	X = 2.497
		N = 319	484	793	N = 1596
		N = 2528	2072	1934	N = 6534
		$\bar{X}$ = 2.460	2.481	2.457	

lower SPA scores, probably because the youngster is neither involved in, nor committed to a change or National process going on.

The educational implication would be to systematically expose youngsters to psycho-social awareness through its activities. Such a desire for a change and concern for National Issues should be based on democratic principles. Moderation on both factors is suggested, considering that their medium scores could lead to relatively medium SPA scores.

Group III: 4 Factor Designs

There were eight designs in this group, examined separately.

Design #4.1

The four factors in this design related to Family and Interaction Modes. They were:

A (1) Family Unity
B (2) Parental Understanding
C (3) Family Pressure
D (18) Family Social Concerns

The results (Table 4.11) showed that six of the ten null hypotheses examined were rejected. Among them were the AC and BC interactions.

Factor D, Family Social Concerns, did not interact with any other variable. In its three contrasts, SPA mean scores at low and high levels were significantly different; but no significant difference was observed between either low and medium, or medium and high levels of the factor.

TABLE 4.11

ANOVA FOR DESIGN #4.1

Source of Variation		Sums of Squares	df	Mean Square	F (obs).
A.	Family Unity	21.058	2	10.529	14.02**
B.	Parental Understanding	98.683	2	49.342	65.68**
C.	Family Pressure	76.435	2	38.218	50.87**
D.	Family Social Concerns	10.461	2	5.231	6.96**
AB.	Interaction	1.813	4	0.453	0.60
AC.	Interaction	14.794	4	3.697	4.92**
AD.	Interaction	5.464	4	1.366	1.82
BC.	Interaction	8.168	4	2.042	2.72*
BD.	Interaction	1.640	4	0.410	0.55
CD.	Interaction	5.482	4	1.370	1.82
	Error	4883.863	6501		

Because of the AC interaction, simple main effects for A & C were examined. Four out of the six such effects were significant and two were not.

In the AC interaction, levels on (A) Family Unity reflect the concern over anxiety within the home - incohesiveness, lack of consideration for others, and quality of interaction between parents and children. High scores depict high anxiety, while low scores do the opposite. (C) Family Pressures levels are about difficulties caused by separation, divorce, illness, financial problems, tragedy and parent-youth strife. High scores depict greater difficulties and emotional instability.

Four of the six simple main effects produced highly significant F's (Table 4.12). Also, the twelve possible contrasts were examined. Eight of them gave highly significant F's. Some non-significant differences were found in the contrasts of both variables (Family Pressures and Family Unit) in their high levels - $A_i(C_3)$, and $C_k(A_3)$, respectively.

In both factors, a common trend was not observed. In factor C (Family Pressure), for instance, SPA means rose as the levels increased for all levels of Family Unity, but this was not true of factor A (Family Unity) for the levels of Family Pressure.

The highest SPA mean was found in the 'medium' Family Unity and 'high' Family Pressure cell. This indicates that when youngsters have anxiety and concern over lack of closeness in their families, and also suffer from much difficulties in their family, they would probably be unable to strive for success in their academic achievement and, therefore report high SPA.

The youngsters may drop-out of school in time to eke out a means of helping the family out of their problems, or escape from those problems.

The implication is that some parents like to discuss their worries

TABLE 4.12

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND C IN DESIGN #4.1.

A: FAMILY UNITY		C: FAMILY PRESSURE	
Levels	Result	Levels	Result
A_i (C_1)	N.S.	C_k (A_1)	**
		$C_1 \sim C_2$	**
A_i (C_2)	N.S.	$C_1 \sim C_3$	**
		$C_2 \sim C_3$	**
A_i (C_3)	**	C_k (A_2)	**
		$C_1 \sim C_2$	**
$A_1 \sim A_2$	N.S.	$C_1 \sim C_3$	**
$A_1 \sim A_3$	N.S.	$C_2 \sim C_3$	**
$A_2 \sim A_3$	**		
		C_k (A_3)	**
		$C_1 \sim C_2$	N.S.
		$C_1 \sim C_3$	**
		$C_2 \sim C_3$	N.S.

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$

TABLE 4.13

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND C.

		A: #1 - FAMILY UNITY			
		1. Low	2. Medium	3. High	
C: #3 - FAMILY PRESSURE	1. Low	$\bar{X}$ = 2.291	2.282	2.399	$\bar{X}$ = 2.301
		N = 1260	625	253	2138
	2. Medium	$\bar{X}$ = 2.476	2.450	2.510	$\bar{X}$ = 2.477
		N = 952	1051	909	2912
	3. High	$\bar{X}$ = 2.690	2.810	2.607	2.680
		N = 210	453	821	1484
		2422	2129	1973	= 6534
		= 2.398	2.477	2.536	

and bring them to the knowledge of their youngsters. The result is usually lack of concentration in school work and a desire to leave school early. Low scores on the two variables are associated with low SPA indicating that those youngsters, who experience less family problems and low anxiety while their parents expect them to achieve the standard set for them.

The school can offer necessary counselling as well as channel the youngsters' anxiety to other interesting extra-curricular activities. Probably, it would call for a meeting with the parents to discuss with them how their family problems are affecting the youngster and how it is too early in his life to get too directly involved in their problems overtly since he can hardly solve them while at school.

In the BC interaction, (B) Parental Understanding levels are related to lack of communication and understanding between a youth and his parents, feeling of dissatisfaction and disappointment over parents' ill treatment of him and his friends. High scores then are depicting high intensity. (C) Family Pressure levels here as in the previous design also relate to the degree of difficulty the youngster has in his family because of separation, divorce and other problems. High scores depict greater difficulties and emotional instability. Four of the six simple main effects examined were significant (Table 4.14).

Also, eleven of the twelve possible contrasts examined were significant. There was an increasing trend whereby, standing on both variable became higher, SPA also became higher(Table 4.15 & Figures 4.3 and 4.4).

The implication is that when a youngster feels disappointed or dissatisfied by the way his parents' treat him and is conscious of his family problems, he finds school boring and wishes to get out of it as soon as possible.

TABLE 4.14

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS B AND C IN DESIGN #4.1

B: PARENTAL UNDERSTANDING		C: FAMILY PRESSURE	
Levels	Results	Levels	Results
B_j (C_1)	**	C_k (B_1)	**
$B_1 \sim B_2$	*	$C_1 \sim C_2$	**
$B_1 \sim B_3$	**	$C_1 \sim C_3$	**
$B_2 \sim B_3$	**	$C_2 \sim C_3$	**
B_j (C_2)	**	C_k (B_2)	**
$B_1 \sim B_2$	**	$C_1 \sim C_2$	**
$B_1 \sim B_3$	**	$C_1 \sim C_3$	**
$B_2 \sim B_3$	N.S.	$C_2 \sim C_3$	**
B_j (C_3)	N.S.	C_k (B_3)	N.S.

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$

TABLE 4.15

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS B AND C.

C. #3 - FAMILY PRESSURE.	B: #2 - PARENTAL UNDERSTANDING 1. Low	2. Medium	3. High	
1. Low	$\bar{X}$ = 2.229	2.340	2.593	$\bar{X}$ = 2.301
	N = 1266	646	226	2138
2. Medium	$\bar{X}$ = 2.332	2.523	2.600	$\bar{X}$ = 2.301
	N = 1035	1037	840	2912
3. High	$\bar{X}$ = 2.596	2.701	2.702	$\bar{X}$ = 2.680
	N = 297	502	685	1484
	2598	2185	1751	= 6534
	$\bar{X}$ = 2.312	2.510	2.639	

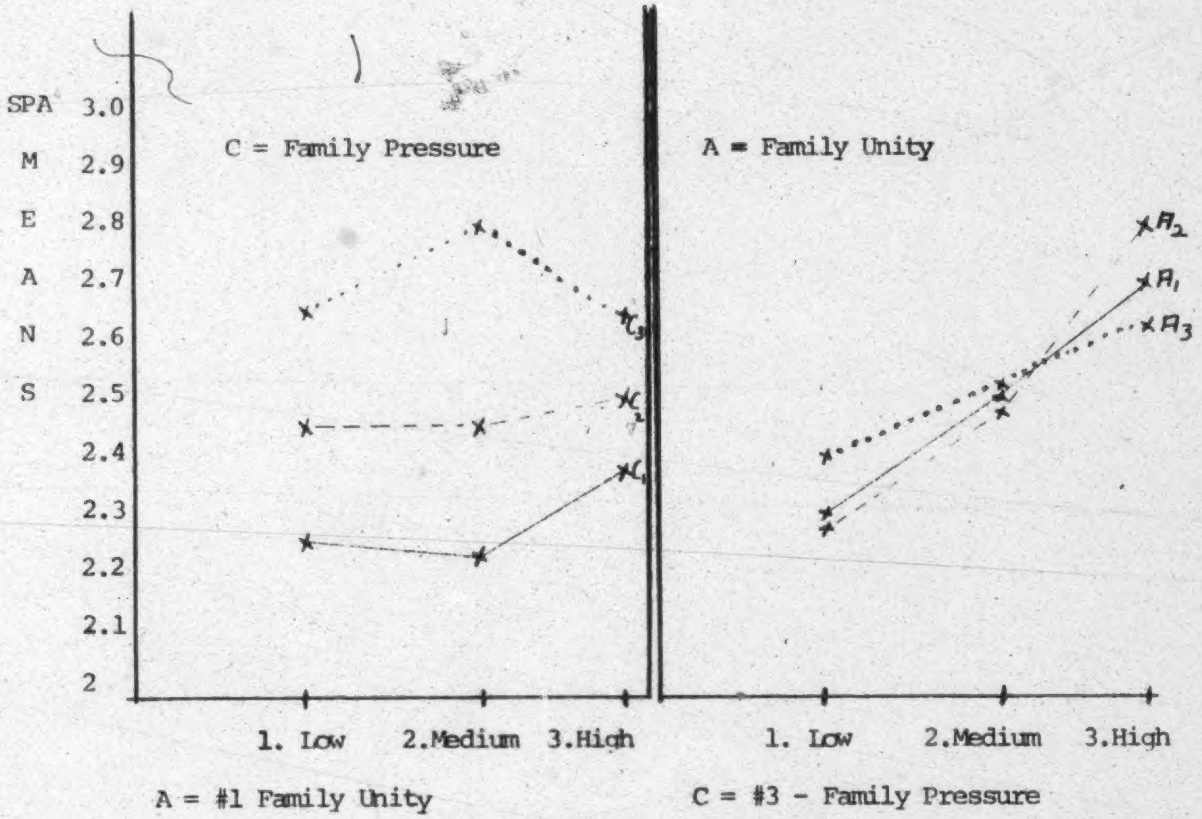

FIGURE 4.3

GRAPHS SHOWING A AND C SIMPLE MAIN EFFECTS

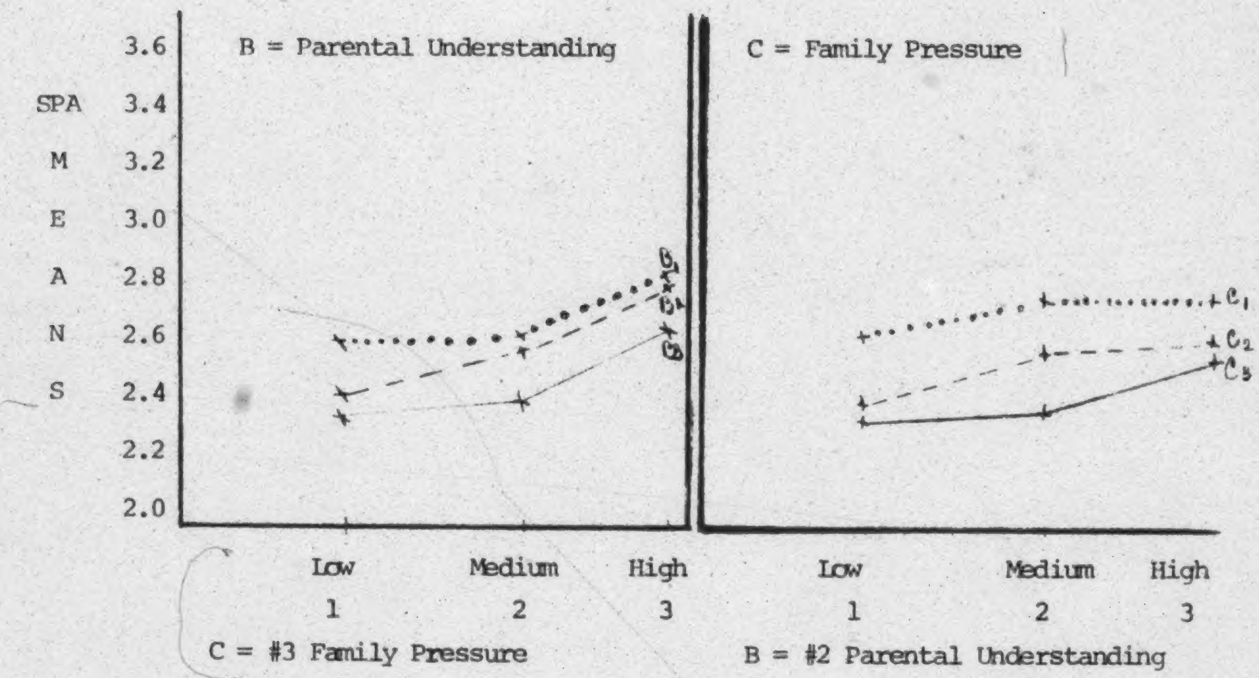

FIGURE 4.4

GRAPHS SHOWING B AND C SIMPLE MAIN EFFECTS to seek liberty and a means of providing for his needs. He, therefore, feels his grades are acceptable as being satisfying to him. The bipolar concept of youth (adolescence) is not uncommon in both schools and homes (Mitchell, 1971). That is, in one breath the adolescent is looked upon as a child, an immature adult, and hence deprived of all reasonable grown-up's privileges and attention. In another breath, he is considered old an mature enough to know better. He is often called upon to participate in adult's activities such as national service, marriage, and other similar duties. The degree with which the youngsters perceive and feel this adult behaviour toward them varies.

Low scores on these two factors, Parental Understanding and Family Pressure, are identified with youngsters who are struggling to meet the high aspirations extraneously set for them. The medium standing on the factors reflect youngsters with medium SPA.

Even though the school can hardly change directly the prevailing circumstances in the homes, it could use the medium of the Parents-Teachers Association to discuss the needs and attention the youth deserves.

There is an overall main effect due to (D) Family Social Concerns. Their scores are characterized by the degree to which the youngster perceives and feels about how his parents are concerned about, and responsive to human needs. High scores indicate high concern and feeling, and vice versa.

In the contrasts (Table 4.16), significant differences did not occur in SPA mean scores between low and medium, or medium and high standing on the variable. But the difference between low and high was highly significant. When levels on the variable became higher, SPA scores were lower.

It is implied that the youngster's feelings of Family Social Concerns could probably enhance the awareness of his parent's expectations toward his personal goals and ambition. He thus reports an unsatisfying lower SPA scores. Positive and negative awareness could be generated by the School through Youth clubs, Red Cross, 4 H Clubs, and Community activities.

Table 4.16

MEANS AND SAMPLE SIZES FOR DIFFERENT LEVELS OF FACTOR D: FAMILY SOCIAL CONCERNS.

Variable		1. Low	2. Medium	3. High	Result of Contrasts
(18) D:		$\bar{X}$ = 2.573	2.468	2.362	Low∿Medium N.S.
Family Social					Low∿High**
Concerns	N =	2041	2347	2146	Medium∿High N.S.

Design #4.2

The four factors in this design were related to SELF ESTEEM OR SELF REGARD (Part 1). They were

A	(5)	Lack of Self Confidence
B	(7)	Personal Faults
C	(10)	Maturity of Values

D (14) Self Regard

It was observed (Table 4.17) that there were two significant interactions among five of the rejected null hypotheses. They were (i) B and C, and (ii) B and D. None of them was highly significant. There was also a significant overall main effect due to Factor A.

In the BC interaction, (B) Personal Faults scores relate to the youth's self-criticism as to whether he had lived up to his ideals, thus bringing about a feeling of guilt. They have to do with the youth's mode of thinking and feeling about himself and also question his self-confidence.

(C) Maturity of Values scores have to do with the youth's ability to make his own decisions rather than depend upon others. High scores are associated with the youth's ability to move towards his own goals and ideals.

Simple main effects and their contrasts were examined(Table 4.18).

The general trend observed in the combinations of the different levels (Table 4.19) was that as the levels of both factors - Personal Faults and Maturity of Values, increased, SPA scores became lower with the exception of the high levels of both factors. The combination of high standing on Maturity of Values and each level of Personal Faults was associated with comparatively lower SPA mean scores. Thus the effect due to high level of Maturity of Values became an attenuating factor on SPA scores on Personal Faults. The implication is that as the youngster becomes more and more mature, he tends to feel that his actual achievement is not satisfying enough to meet his ideals and goals. The cell-Low Maturity and Low Personal Faults (Table 4.19) contained the highest SPA

TABLE 4.17

ANOVA FOR DESIGN #4.2

Source of Variable	Sum of Squares	df	Mean Square	F(observed)
A. Lack of Self-Confidence	7.301	2	3.650	4.86**
B. Personal Faults	3.975	2	1.488	1.98
C. Maturity of Values	39.684	2	19.842	26.42**
D. Self Regard	164.622	2	82.311	109.59**
AB. Interaction	1.484	4	0.371	0.49
AC. Interaction	3.739	4	0.935	1.24
AD. Interaction	5.137	4	1.284	1.71
BC. Interaction	7.919	4	1.980	2.64*
BD. Interaction	7.395	4	1.849	2.46*
CD. Interaction	4.937	4	1.234	1.64
Error	4882.661	6501	0.751	

TABLE 4.18

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS B AND C IN DESIGN #4.2

B: PERSONAL FAULTS		C: MATURITY OF VALUES	
Levels	Result	Levels	Result
B_j (C_1)	*	C_k (B_1)	**
$B_1 \sim B_2$	**	$C_1 \sim C_2$	**
$B_1 \sim B_3$	**	$C_1 \sim C_3$	**
$B_2 \sim B_3$	N.S.	$C_2 \sim C_3$	**
B_j (C_2)	N.S.	C_k (B_2)	**
		$C_1 \sim C_2$	N.S.
B_j (C_3)	*	$C_1 \sim C_3$	**
		$C_2 \sim C_3$	**
$B_1 \sim B_2$	N.S.		
$B_1 \sim B_3$	N.S.	C_k (B_3)	N.S.
$B_2 \sim B_3$	N.S.		

Note: *Probability of $F \leq .05$ but $> .01$
**Probability of $F \leq .01$

TABLE 4.19

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS B AND C.

B: #7 - PERSONAL FAULTS

			1. Low	2. Medium	3. High		
C: #10 - MATURITY OF VALUES	1. Low	$\bar{X}$ =	2.667	2.509	2.511	$\bar{X}$ =	2.544
		N =	553	953	1020	N =	2526
	2. Medium	$\bar{X}$ =	2.489	2.452	2.453		2.465
		N =	841	951	585		2377
	3. High	$\bar{X}$ =	2.321	2.320	2.460		2.345
			789	553	289		1631
			2183	2457	1894	=	6534
		$\bar{X}$ =	2.473	2.444	2.485		

scores.

In schools, Maturity of Values which is very crucial to SPA, could be enhanced by providing opportunities for a variety of reasoning exercises allowing youngsters to experience sharing responsibility through class supervision as an opportunity for participatory education. Maturity of Values is gained through practice. It is also observable that, as Personal Faults decreased and Maturity increased, the youngster probably perceived and felt his own actual achievement more soberly in accordance with his own ideals and expectations, hence the associated lowered SPA scores.

As already described in this design, scores on (B) Personal Faults indicate a source of self-criticism as a youth's awareness of not having lived up to his ideals. As a result, he feels guilty. This scale measures his feeling of self-criticism, both with respect to what he has done and what he has failed to do. It reflects a mode of thinking and feeling about oneself that often undermines one's self-confidence. High scores are related to high feeling of self-criticism, and vice versa.

BD interaction: Variable (B) Personal Faults was explained above. (D) Self Regard scores reflect youths' experience as they hold a low opinion of themselves,when unfavourable conditions are prolonged or become frequent. Self-confidence or self-esteem is, therefore, undermined. The Self-Regard scale measures the degree to which youths accept themselves as persons of worth and promise.

Five simple main effects out of the six examined showed highly significant differences in SPA mean scores. Thus only Personal Faults with high Self Regard was not significant, $B_1(D)_3$ (Table 4.20). Twelve related contrasts of the possible sixteen were highly significant.

TABLE 4.20

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS B AND D IN DESIGN #4.2

B: PERSONAL FAULTS		D: SELF REGARD	
Levels	Result	Levels	Result
B_j (D_1)	**	D_m (B_1)	**
$B_1 \sim B_2$	N.S.	$D_1 \sim D_2$	**
$B_1 \sim B_3$	**	$D_1 \sim B_3$	**
$B_2 \sim B_3$	N.S.	$D_2 \sim D_3$	**
B_j (D_2)	**	D_m (B_2)	**
$B_1 \sim B_2$	**	$D_1 \sim D_2$	**
$B_1 \sim B_3$	**	$D_1 \sim D_3$	**
$B_2 \sim B_3$	N.S.	$D_2 \sim D_3$	**
B_j (D_3)	N.S.	D_m (B_3)	**
		$D_1 \sim D_2$	**
		$D_1 \sim D_3$	**
		$D_2 \sim D_3$	N.S.

Note: **Probability of $F \leq .05$ but $> .01$
*Probability of $F \leq .01$

In both factors, low levels were associated with higher SPA, and medium-high levels with lower SPA scores (Table 4.21). High level of Self Regard was related to lower SPA scores wherever it combined with each level of Personal Faults. The low levels of the two variables (Table 4.21) showed the highest SPA mean scores (Figure 4.5).

The implication is that SPA scores are highest when the youngster is low on both Self Regard and Personal Faults. But as he gains on the two factors (except for the H-H cell), SPA scores become lower. Significant differences are observed in SPA as the two factors are developed. It is essential that the youngster should gain in Self Regard. Personal Faults which also indicates self-criticism and self awareness which are necessary to enhance a realistic self-perception of achievement. The schools, teachers and counsellors should provide opportunities for youth to develop self-criticism and self-acceptance, by certain 'significant others' accepting the youth to accept himself. It is a reflective behaviour. Without self-criticism and self-acceptance, a youngster could delude himself with a feeling of pre-emptive satisfaction about his achievement.

The significant overall main effect was due to Factor A, Lack of Self-Confidence. Scores on this factor are related to how much the youngster is afraid of making mistakes. High scores are associated with self-consciousness, uneasy in group situations, anxious to please others, and over-eager to avoid embarrassing situations.

High level (Table 4.22) on this factor are associated with slightly higher SPA scores. The SPA mean scores of the low and medium levels are identical. There is a significant difference between low and high, as well as on medium and high. It thus suggests that it

TABLE 4.21

MEANS AND SAMPLES SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS B AND D.

		B: #7 - PERSONAL FAULTS			
		1. Low	2. Medium	3. High	
D: #14 - SELF REGARD	1. Low	$\bar{X}$ = 2.824	2.688	2.594	$\bar{X}$ = 2.666
		N = 336	676	954	N = 1966
	2. Medium	$\bar{X}$ = 2.601	2.435	2.418	2.481
		N = 745	1025	660	2430
	3. High	$\bar{X}$ = 2.279	2.230	2.271	2.264
		N = 1102	756	280	2138
		2183	2457	1894	6534
		$\bar{X}$ = 2.473	2.444	2.485	

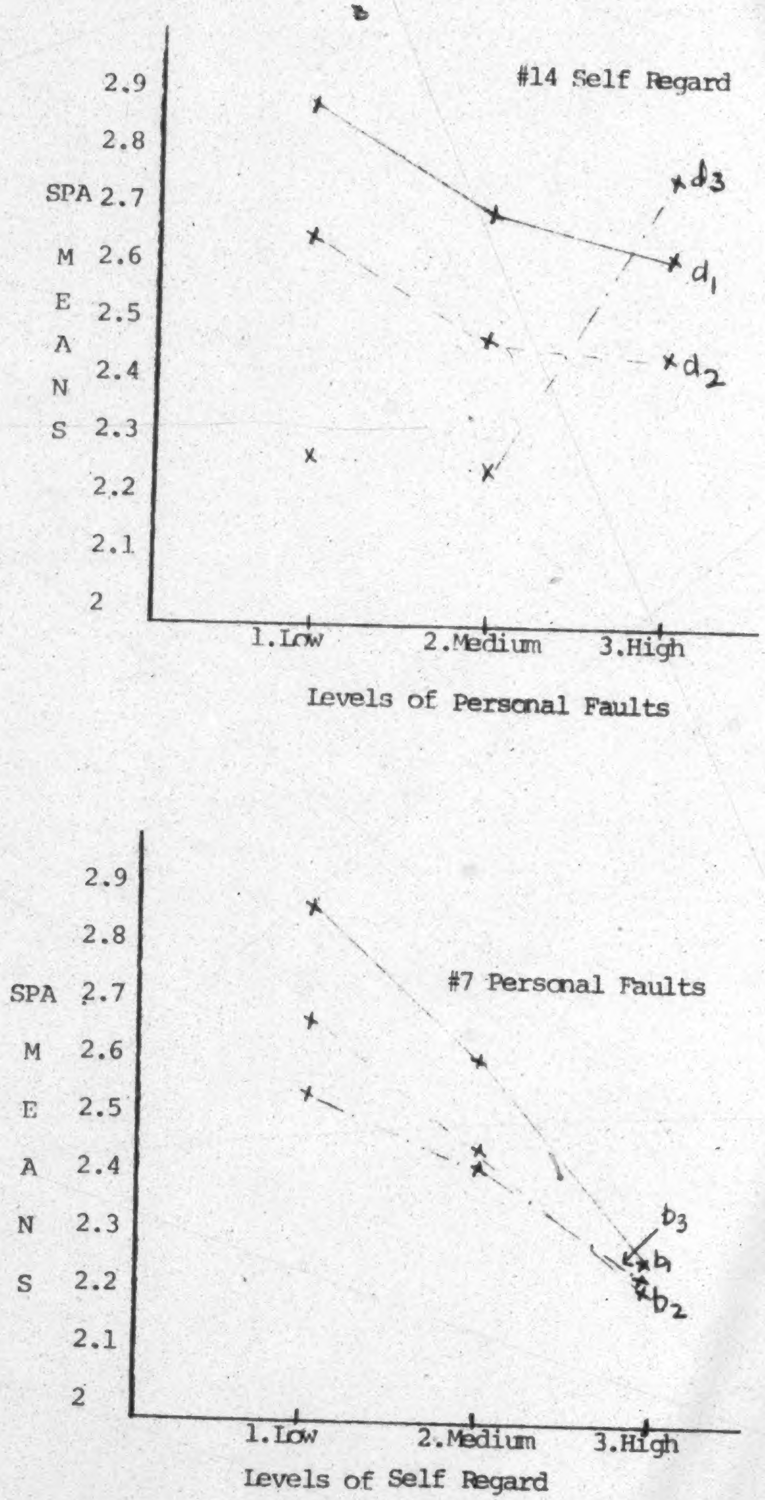

FIGURE 4.5. GRAPHS SHOWING B AND D SIMPLE MAIN EFFECTS.

TABLE 4.22

MEANS AND SAMPLE SIZES OF DIFFERENT LEVELS OF FACTOR A: LACK OF SELF CONFIDENCE.

Variable	1. Low	2. Medium	3. High	Result of Contrasts
(5) A: Lack	X = 2.444	2.444	2.516	Low~Medium N.S.
of Self				Low~High**
Confidence	N = 2238	2301	1995	Medium~High **

requires some degree of self-confidence, at least beyond the medium level, for the youngster to perceive and feel realistically about his actual achievement. High level on Lack of Self-Confidence (which implies anxiety to please others) is associated with increase in SPA scores.

Undoubtedly, youngsters need some degree of a feeling of self-confidence and, therefore, need to be helped in the school environment through such activities as could elicit initiative and positive reinforcement from 'significant others' (Bandura et. al., 1964; 1967; and Bandura, 1963).

Design #4.3

The four factors in this design were BIOGRAPHICAL AND DEMOGRAPHIC in nature. They were:

A. (195) Socio-Economic Status of Parents

B. Sex.

C. Age

D. (196/197) Parent's/Guardian's Educational Status

In the results presented (Table 4.23), there are seven rejected hypotheses including three on interactions. The latter are AB, AD, and BC, each of which was examined separately.

In the AB interaction, the variable (A) Socio-Economic Status of Parents is considered with regard to the differential sub-cultures of youngsters within each of its three levels: low, medium, and high. The F for each of the five simple main effects was highly significant. Similarly, all the six contrasts gave significant F's (Table 4.24).

TABLE 4.23

ANOVA FOR DESIGN #4.3

Source of Variation	Sum of Squares	df	Mean Square	F(observed)
A. Socio Economic Status of Parents	104.862	2	52.431	70.80**
B. Sex	65.320	1	65.320	88.20**
C. Age	8.316	3	2.772	3.74*
D. Parents/Guardians Educational Status	94.891	2	47.446	64.06**
AB. Interaction	7.823	2	3.911	5.28**
AC. Interaction	5.096	6	0.850	1.15
AD. Interaction	11.786	4	2.946	3.98**
BC. Interaction	8.673	3	2.891	3.90**
BD. Interaction	3.930	2	1.965	2.65
CD. Interaction	1.812	6	0.303	0.41
Error	4815.362	6502	0.741	

TABLE 4.24

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND B IN DESIGN #4.3

A: SOCIO-ECONOMIC STATUS OF PARENTS		B: SEX	
Levels	Result	Levels	Result
B_j (A_1)	**	A_i (B_1)	**
		$A_1 \sim A_2$	**
		$A_1 \sim A_3$	**
B_j (A_2)	**	$A_2 \sim A_3$	**
		A_i (B_2)	**
B_j (A_3)	*	$A_1 \sim A_2$	**
		$A_1 \sim A_3$	
		$A_2 \sim A_3$	*

Note: *Probability of $F \leq .05$ but $> .01$
**Probability of $F \leq .01$

The SPA means for the combinations of the different levels of the two factors were seen to fall in a general pattern (Table 4.25), leading to the following generalizations. (1) In SPA means they were lower for females than for males at each SES level.

In this study Girls in each level of SES of Parents showed lower SPA indicating that they are probably more achievement-oriented than Boys in spite of the social handicap. This is contrary to what was expected.

It was anticipated that Boys as prospective bread-winners for the family would probably be more achievement-oriented and would therefore perceive their actual grades as less satisfying, leading to lower SPA. It did not turn out to be so. A plausible explanation for this reversal in the Girls' expected SPA could be that the Women's Liberation Movement has heightened the academic expectations of Girls.

(2) The SPAs tended to be lower as SES became higher. This is very interesting and indicates that low SES Parents are probably not capable of motivating the youth to strive harder for better achievement as a result of their sub-culture and social handicaps. Consequently, those youngsters tended to perceive whatever their actual grades were as more satisfying to them and,hence, reported higher SPA. Obviously, youngsters who come from high levels of both of the factors are probably working hard to keep pace with their parents' expectations, hence they perceive their actual achievement as low. The reverse was the case for youths from low-low combination.

AD interaction: The variable A is SES of Parents. (D) Parent's/ Guardian's Educational Status relates to the amount of education of both

TABLE 4.25

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND B.

A: #195 - SOCIO-ECONOMIC STATUS OF PARENTS.

		1. Low	2. Medium	3. High	
B: SEX	B_1. Males	$\bar{X}$ = 2.801	2.610	2.315	$\bar{X}$ = 2.572
		N = 522	1636	803	N = 2961
	B_2.Females	$\bar{X}$ = 2.584	2.363	2.251	$\bar{X}$ = 2.378
		N = 709	1948	916	N = 6534.
		1231	3584	2.295	6534.
		$\bar{X}$ = 2.676	2.476	1719	

parents, classified as low, medium or high (details are given in Chapter III).

All of the six simple main effects related to this interaction yielded significant F's (Table 4.26). The same held true for thirteen of the eighteen contrasts. At the low and medium levels of Parent's/Guardian Educational Status, no significant F's were observed for the difference between medium and high SES of Parents.

The SPA means for the combinations of levels of the two factors (Table 4.27) do not show clear-cut trends when the level of A or of B is 'low'. However for levels 'medium' and 'high' of factor A, there is a downward trend -- SPA decreasing with increase in the levels of factor B. The reverse holds true for the corresponding levels of factor B. This phenomenon is very interesting. It should be noted that SPA is the lowest in the high-high combination of the two factors, and highest in the low-low combination, thus inversely proportional in reflecting the familial pressure or otherwise, on the youths.

BC interaction. The variable (B) is Sex and (C) is Age - 15, 16, 17, and 18 years.

Five of the six simple main effects were significant, four of them for the four age levels for each of which Boys' SPA was higher than that of Girls. Girls did not show age-related difference in SPA, and accounted for the only non-significant simple main effect (Table 4.28). Two of the six possible contrasts examined (those of Boys) gave significant F's. Those for Girls did not need to be examined.

However, as far as trend is concerned, only the $C_1 \sim C_2$, $C_2 \sim C_3$ and $C_3 \sim C_4$ contrasts are meaningful. The first two of them gave

TABLE 4.26

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND D IN DESIGN #4.3.

A: SOCIO-ECONOMIC STATUS OF PARENTS		D: PARENT'S/GUARDIAN'S EDUCATIONAL STATUS	
Levels	Result	Levels	Result
$A_i\ (D_1)$	**	$D_m\ (A_1)$	**
$A_1 \sim A_2$	**	$D_1 \sim D_2$	**
$A_1 \sim A_3$	N.S.	$D_1 \sim D_3$	N.S.
$A_2 \sim A_3$	N.S.	$D_2 \sim D_3$	N.S.
$A_i\ (D_2)$	**	$D_m\ (A_2)$	**
$A_1 \sim A_2$	**	$D_1 \sim D_2$	**
$A_1 \sim A_3$	**	$D_1 \sim D_3$	**
$A_2 \sim A_3$	N.S.	$D_2 \sim D_3$	**
$A_i\ (D_3)$	**	$D_m\ (A_3)$	**
$A_1 \sim A_2$	**	$D_1 \sim D_2$	**
$A_1 \sim A_3$	**	$D_1 \sim D_3$	**
$A_2 \sim A_3$	**	$D_2 \sim D_3$	**

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

TABLE 4.27.

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND D.

			A: #195 - SOCIO-ECONOMIC STATUS OF PARENTS.			
			1. Low	2. Medium	3. High	
B: #196/197 - PARENTS/GUARDIANS EDUCATIONAL STATUS	1. Low	$\bar{X}$ =	2.836	2.653	2.712	$\bar{X}$ = 2.708
		N =	421	1004	111	N = 1536
	2. Medium	$\bar{X}$ =	2.566	2.439	2.394	$\bar{X}$ = 2.456
		N =	615	1857	602	N = 3074
	3. High	$\bar{X}$ =	2.677	2.322	2.190	$\bar{X}$ = 2.289
		N =	195	723	1006	1924
		N =	1231	3584	1719	= 6534
		$\bar{X}$ =	2.676	2.476	2.295	

TABLE 4.28

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS B AND C IN DESIGN #4.3

B: SEX		C: AGE	
Levels	Result	Levels	Result
$B_j\ (C_1)$	**	$C_k\ (B_1)$	**
		$C_1 \sim C_2$	**
		$C_1 \sim C_3$	N.S.
$B_j\ (C_2)$	**	$C_1 \sim C_4$	N.S.
		$C_2 \sim C_3$	*
		$C_2 \sim C_4$	N.S.
		$C_3 \sim C_4$	N.S.
$B_j\ (C_3)$	**		
		$C_k\ (B_2)$	N.S.
$B_j\ (C_4)$	**		

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

significant F's, indicating significant differences between fifteen and sixteen years, ~~as well~~ as between sixteen and seventeen years (for Boys). However from fifteen to seventeen years the trend was not clear. (Table 4.29).

DESIGN # 4.4

The four variables in this design were:

A. (195) Socio-Economic Status of Parents.
B. (202) Family Unit.
C. (196/197) Parent's/Guardian's Educational Status.
D. (214) Size of Family

As Table 4.30 shows, five of the ten null hypotheses were rejected, including the one on AC interaction.

The AC interaction. The variables in this interaction were: (A) Socio-Economic Status of Parents and (C) Parent's/Guardian's Educational Status. This interaction has already been dealt with in Design #4.3, (as AD interaction) nor is it necessary to deal with factors A and C here for the same reason. This leaves us with only two of the five rejected null hypotheses - those related to overall effects B and D.

(B) Family Unit

Family Unit was considered to be of two types: 1. Separated and 2. Unseparated. In the former, the youngster is living with one parent only, in the latter, with both.

SPA was significantly higher for youths from "unseparated" type.

TABLE 4.29

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS B AND C.

		B: SEX.		
		1. Boys	2. Girls	
C: AGE	1. 15 yrs.	$\bar{X}$ = 2.513	2.404	$\bar{X}$ = 2.452
		N = 1191	1501	N = 2692
	2. 16 yrs.	$\bar{X}$ = 2.671	2.373	$\bar{X}$ = 2.505
		N = 767	979	N = 1746
	3. 17 yrs.	$\bar{X}$ = 2.533	2.325	$\bar{X}$ = 2.422
		N = 710	813	N = 1523
	4. 18 yrs.	$\bar{X}$ = 2.635	2.414	$\bar{X}$ = 2.527
		N = 293	280	N = 573
		N = 2961	3573	= 6534.
		$\bar{X}$ = 2.572	2.378	

TABLE 4.30

ANOVA FOR DESIGN #4.4

Source of Variation	Sum of Squares	df	Mean Squares	F(observed)
A. Socio-Economic Status of Parents	104.862	2	52.431	69.85**
B. Family Unit	15.273	1	15.273	26.35**
C. Parents/Guardians Educational Status.	88.614	2	44.307	59.03**
D. Size of Family	9.231	1	9.231	12.30**
AB. Interaction	3.393	2	1.697	2.26
AC. Interaction	11.836	4	2.959	3.94**
AD. Interaction	0.588	2	0.294	0.39
BC. Interaction	2.463	2	1.231	1.64
BD. Interaction	0.390	1	0.390	0.52
CD. Interaction	1.649	2	0.825	1.10
Error	4889.571	6514	0.751	

(Table 4.31). It seems that the youths from separated families do not have the necessary push towards high academic goals, so that they tend to perceive their actual achievement as satisfying. This phenomenon has been alluded to by previous researchers, for instance, O'Neill (1971), Parsons *et al*, (1955), Smith (1970), Becker *et al*, (1967), Brantly (1969), and Hoffman *et al.*, (1960).

(D) Size of Family

The Size of Family was considered to be either 1. Large (three or more children), or 2. Small (less than three children).

SPA was significantly higher for youths from 'large' families (Table 4.31). Considering that large families are associated with dissipation of parental affection, support and motivation, it could be rationally expected that youngsters from such families would report higher SPA mean since they perceive their actual grades with satisfaction.

DESIGN # 4.5

The four factors in this design were:

A. (190) Religiosity of Youths.

B. (195) Socio-Economic Status of Parents.

C. (DENOMINATION) Religious Affiliation.

D. (196/197) Parent's/Guardian's Educational Status.

There were three highly significant interactions among the seven rejected null hypotheses (Table 4.32). These were AB, AC, and BD, respectively. Since the last one, BD interaction, has been included

TABLE 4.31

MEANS AND SAMPLE SIZES FOR DIFFERENT LEVELS OF FACTORS B AND D, RESPECTIVELY.

Variable	1.Parents Separated	2.Parents Unseparated	Results
(202) B: Family Unit	$\bar{X} = 2.637$	2.449	$B_1 \sim B_2$**
	N = 595	5939	
	1.Family with ≥ 3 chn.	2.Family with < 3 chn.	Results
(214) D: Size of Family	$\bar{X} = 2.510$	2.421	$D_1 \sim D_2$**
	N = 3264	3270	

TABLE 4.32

ANOVA FOR DESIGN #4.5.

Source of Variation	Sums of Squares	df	Mean Squares	F(observed)
A. Religiosity of Youths	95.541	2	47.770	64.99**
B. Socio-Economic Status of Parents	97.917	2	46.958	66.60**
C. Religious Affiliation	26.140	2	13.070	17.78**
D. Parent's/Guardian's Educational Status	85.110	2	42.555	57.89**
AB Interaction	11.970	4	2.992	4.07**
AC Interaction	12.194	4	3.048	4.15**
AD Interaction	2.138	4	0.535	0.73
BC Interaction	6.906	4	1.726	2.35
BD Interaction	10.300	4	2.575	3.50**
CD Interaction	.929	4	0.232	0.32
Error	4778.729	6501	0.735	

in design #4.3 as AD interaction, it will not be dealt with here. The details about the remaining two are as follows.

AB interaction: The standing on variable (A) Religiosity of Youths reflects the frequency with which the youth attends religious meetings or services. High frequency meant 'high' Religiosity.

From Table 4.33, all the six simple main effects as well as most of the possible contrasts can be seen as highly significant. On both the variables, SPA had a clear downward trend, that is, as their levels rose from low to high in either case, SPA means fell (Table 4.34). It was observed that A_1 and A_2 alike for each of the three levels of B in their contrasts.

The implication of the trend seems to be that when youngsters strictly uphold an ideal, say in religion, conviction or faith, they tend to strive hard towards that goal and they perceive their actual achievement as low.

The same applies to youngsters from all the SES's of Parents. This is specially evident from the lowest SPA in HH cell, and highest in LL cell.

AC interaction: The variables involved in this interaction were (A) Religiosity of Youths as described above, and (C) Religious Affiliation. The latter comprised, 1. Catholic, 2. Protestants, and 3. Others: neither RC nor Protestant.

The results from all the six simple main effects, as well as their possible contrasts are presented in Tables 4.35 and 4.36. It was observed that the SPA mean for Catholics was significantly higher than either Protestants or Others, whereas the latter two groups were alike at all the levels of factor A.

TABLE 4.33

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND B IN DESIGN #4.5.

A: RELIGIOSITY OF YOUTHS		B: SOCIO-ECONOMIC STATUS OF PARENTS	
Levels	Result	Levels	Result
A_i (B_1)	**	B_j (A_1)	**
$A_1 \sim A_2$	N.S.	$B_1 \sim B_2$	**
$A_1 \sim A_3$	**	$B_1 \sim B_3$	**
$A_2 \sim A_3$	**	$B_2 \sim B_3$	N.S.
A_i (B_2)	**	B_j (A_2)	**
$A_1 \sim A_2$	N.S.	$B_1 \sim B_2$	**
$A_1 \sim A_3$	**	$B_1 \sim B_3$	**
$A_2 \sim A_3$	**	$B_2 \sim B_3$	**
A_i (B_3)	**	B_j (A_3)	**
$A_1 \sim A_2$	N.S.	$B_1 \sim B_2$	**
$A_1 \sim A_3$	**	$B_1 \sim B_3$	**
$A_2 \sim A_3$	N.S.	$B_2 \sim B_3$	**

Note: *Probability of $F<.05$ but $>.01$
**Probability of $F<.01$.

TABLE 4.34

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND B.

A: (190) RELIGIOSITY OF YOUTHS.

B: (195) SOCIO-ECONOMIC STATUS OF PARENTS.

	1. Low	2. Medium	3. High	
1. Low	$\bar{X}$ = 3.058	2.919	2.537	$\bar{X}$ = 2.676
	N = 155	235	841	N = 1231
2. Medium	$\bar{X}$ = 2.702	2.582	2.414	$\bar{X}$ = 2.476
	N = 426	584	2574	N = 3584
3. High	$\bar{X}$ = 2.500	2.364	2.252	$\bar{X}$ = 2.448
	N = 163	305	1251	N = 1719
	744	1124	4666	= 6534
	$\bar{X}$ = 2.731	2.593	2.393	

TABLE 4.35

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND C IN DESIGN #4.5

A: RELIGIOSITY OF YOUTHS		C: DENOMINATION (RELIGIOUS AFFILIATION)	
Levels	Results	Levels	Results
A_i (C_1)	**	C_k (A_1)	**
$A_1 \sim A_2$	N.S.	$C_1 \sim C_2$	*
$A_1 \sim A_3$	**	C_1 C_3	*
$A_2 \sim A_3$	**	$C_2 \sim C_3$	N.S.
A_i (C_2)	**	C_k (A_2)	**
$A_1 \sim A_2$	*	$C_1 \sim C_2$	**
$A_1 \sim A_3$	**	$C_1 \sim C_3$	**
$A_2 \sim A_3$	**	$C_2 \sim C_3$	N.S.
A_i (C_3)	**	C_k (A_3)	**
$A_1 \sim A_2$	N.S.	$C_1 \sim C_2$	**
$A_1 \sim A_3$	**	$C_1 \sim C_3$	**
$A_2 \sim A_3$	**	$C_2 \sim C_3$	N.S.

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

TABLE 4.36

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND C.

A: (190) RELIGIOSITY OF YOUTHS.

C: (DEONOMINATION) - RELIGIOUS AFFILIATION		1. Low	2. Medium	3. High	
1.Catholics	$\bar{X}$ =	2.964	2.876	2.460	$\bar{X}$ = 2.552
	N =	167	209	1482	N = 1858
2.Protestants	$\bar{X}$ =	2.669	2.508	2.373	$\bar{X}$ = 2.424
	N =	293	571	2317	N = 3181
3.Others	$\bar{X}$ =	2.658	2.564	2.332	$\bar{X}$ = 2.448
	N =	284	344	867	N = 1495
		744	1124	4666	= 6534
	$\bar{X}$ =	2.731	2.593	2.393	

Rise in the level of Religiosity of Youths as in the previous design seems to be associated with lower SPA for Catholics and, separately, for Protestants and Others. Occasionally, this lowering is not statistically significant, but mostly it is.

The result is in line with the findings of Weber(1930), which stated that social goals and life expectations are different for Catholics and Protestants. The higher SPA for the former and lower for the latter illustrate the discrepancy.

DESIGN # 4.6

The four factors in this design were:

A.	(195)	Socio-Economic Status of Parents.
B.	(202)	Family Unit.
C.	(198)	Drug (including Alcohol) Usage.
D.	(214)	Size of Family.

Table 4.37 shows that six of the ten null hypotheses rejected included AB and CD interactions.

AB interaction: The variables in this interaction were (A) SES of Parents, and (B) Family Unit. Four of the five possible simple main effects gave significant F's (Table 4.38). Of the nine possible contrasts, eight showed significant F's, the only exception being $A_{2-3}(B_2)$, that is, between medium and high SES of parents in 'separated' families.

Taking factor B, one could say that the SPA for the youngsters from separated families was expected to be higher than that for their

TABLE 4.37

ANOVA FOR DESIGN #4.6

Source of Variation	Sums of Squares	df	Mean Square	F(observed)
A. Socio-Economic Status of Parents	104.862	2	52.431	70.65**
B. Family Unit	15.273	1	15.273	20.58**
C. Drug (including Alcohol) Usage.	139.753	2	69.377	93.48**
D. Size of Family	10.319	1	10.319	13.90**
AB. Interaction	4.784	2	2.392	3.22*
AC. Interaction	6.085	4	1.521	2.05
AD. Interaction	0.761	2	0.381	0.51
BC. Interaction	3.625	2	1.812	2.44
BD. Interaction	0.338	1	0.338	0.45
CD. Interaction	8.835	2	4.418	5.95**
Error	4834.241	6514	0.742	

TABLE 4.38

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND B IN DESIGN #4.6.

A: SOCIO-ECONOMIC STATUS OF PARENTS		B: FAMILY UNIT	
Levels	Result	Levels	Result
A_i (B_1)	**	B_j (A_1)	**
$A_1 \sim A_2$	**		
$A_1 \sim A_3$	**		
$A_2 \sim A_3$	**	B_j (A_2)	*
A_i (B_2)	**		
$A_1 \sim A_2$	**	B_j (A_3)	N.S.
$A_1 \sim A_3$	**		
$A_2 \sim A_3$	N.S.		

Note: *Probability of $F < .05$ but $> .01$.
**Probability of $F < .01$.

counterparts from unseparated ones at each SES level, since such youths experience lower support and scanty motivation for success. This actually turned out to be so for the low and medium SES levels, but not for the high SES (Table 4.39). The exception does seem to have some justification since high SES parents, even though separated from their spouses, should be able to provide the needed financial and emotional support and motivation to the youngster for achievement.

The youngsters from the combination of 'low SES' and 'separated families' reported the highest SPA, probably because they perceive their actual achievement as pre-eminently satisfying in the absence of motivation and financial support. This is further substantiated by the fact that the SPA is the lowest for the youths from the combination of 'unseparated families' and 'high SES'.

The implication is that in terms of economic and socio-psychological support, the youngsters who come from unseparated homes are at an advantage over their counterparts from separated families. This happened in view of the high achievement, ideals, and values which their parents and society expect of them.

CD interaction: On the variable C, Drug (including Alcohol) Usage, the levels indicate the degree to which the youngster is using drugs and/or alcohol. The various types of drugs used and their frequencies were considered low, medium and high as classified in Chapters I and III. Factor D, Size of Family, is Large (with three or more children) and Small (less than three children).

The results (Table 4.40) showed four significant F's out of five,

TABLE 4.39

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND B.

		A: (195) SOCIO-ECONOMIC STATUS OF PARENTS.			
		1. Low	2. Medium	3. High	
B: (202) FAMILY UNIT	1.Separated	$\bar{X}$ = 2.937	$\bar{X}$ = 2.581	2.422	$\bar{X}$ = 2.639
		N = 159	289	147	N = 595
	2.Unseparated	$\bar{X}$ = 2.637	$\bar{X}$ = 2.466	2.283	$\bar{X}$ = 2.449
		N = 1072	3295	1572	N = 5939
		N = 1231	3584	1719	= 6534
		$\bar{X}$ = 2.676	2.476	2.295	

TABLE 4.40

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS C AND D IN DESIGN #4.6.

C: DRUG (INCLUDING ALCOHOL) USAGE		D: SIZE OF FAMILY	
Level	Result	Level	Result
C_k (D_1)	**	D_m (C_1)	**
$C_1 \sim C_2$	**	$(D_1 \sim D_2)$	(**)
$C_1 \sim C_3$	**		
$C_2 \sim C_3$	N.S.	D_m (C_2)	N.S.
C_k (D_2)	**	D_m (C_3)	*
$C_1 \sim C_2$	**	$(D_1 \sim D_2)$	(*)
$C_1 \sim C_3$	**		
$C_2 \sim C_3$	*		

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

those related to as many possible simple main effects examined. The exception was for families at the medium level of Drug Usage. Seven of the eight contrasts showed significant F's, the only non-significant F being for medium and high Drug Usage by Youths from small Families, $C_{2-3}(D_1)$.

The trend observable from Table 4.41 was rather inconsistent. For example, in large and small families, as Drug Usage increased, so did SPA. The increase in one case was not significantly large, however. Regarding family size, SPA dropped significantly from large to small families for low Drug Usage, rose significantly for high Drug Usage but did not change for medium Drug Usage.

The highlights for the combinations of the levels of the two factors were:

> SPA's were amongst the highest for youths characterized by medium and high Drug Usage and were very low for those with low Drug Usage. This applied to youths coming from large as well as small families. There was interaction between the two factors, however, because with Drug Usage increasing, SPA increased more rapidly for the youths from large families than those from small ones.

One wonders how and why youngsters start using drugs. The reasons could be varied and complex.

It is obvious from this study, however, that its heavy usage is associated to high SPA, that is, lowered motivation.

TABLE 4.41

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS C AND D.

D: (214) SIZE OF FAMILY	C: (198) DRUG (INCLUDING ALCOHOL) USAGE.			
	1. Low	2. Medium	3. High	
1. >3children (Large)	$\bar{X}$ = 2.478	2.985	2.986	$\bar{X}$ = 2.510
	N = 3053	137	74	N = 3264
2. <3children (Small)	$\bar{X}$ = 2.378	3.055	3.426	$\bar{X}$ = 2.421
	N = 3089	127	54	N = 3270
	6142	264	128	= 6534
	2.427	3.019	3.172	

DESIGN # 4.7

The four factors in this design were:

A. (193) Type of School Attending.

B. (195) Socio-Economic Status of Parents.

C. (196/197) Parent's/Guardian's Educational Status

D. (214) Size of Family.

Seven of the ten rejected null hypotheses in this design, contained three interactions -- AC, AD, and BC (Table 4.42). Of these, one interaction has already been dealt with (as AD interaction in design 4.3) and therefore, needs no further comments here. The remaining two interactions are examined below. They are AC and AD.

AC interaction: Variable A, Type of School Attending has four types: 1. Public, 2. Private, 3. Parochial and 4. Others. Each of these types probably has its own characteristic philosophical orientation and related objectives to which the youngsters are supposed to be exposed (Dougherty, 1965).

All but one of the seven simple main effects produced significant F's, the exception being Parent's/Guardian's Educational Status within Parochial schools - $C_k(A_3)$ (Table 4.43). Some highlights of the significant F's from sixteen of the possible twenty-seven contrasts were:

(1) For each level of (C) Parent's/Guardian's Educational Status, the SPA's for Public and Private schools were not significantly different.

(2) Significant differences occurred between Public and

TABLE 4.42

ANOVA FOR DESIGN #4.7

Source of Variation	Sums of Squares	df	Mean Squares	F(observed)
A. Type of School Attending	134.035	3	44.678	61.09 **
B. Socio-Economic Status of Parents	94.982	2	47.481	64.93 **
C. Parents/Guardians Educational Status	84.244	2	42.122	57.60 **
D. Size of Family	5.859	1	5.859	8.01 **
AB Interaction	6.758	6	1.126	1.54
AB Interaction	26.753	6	4.459	6.10 **
AD Interaction	10.724	3	3.575	4.89 **
BC Interaction	7.927	4	1.982	2.71 *
BD Interaction	0.341	2	0.171	0.23
CD Interaction	1.572	2	0.786	1.07
Error	4754.692	6502	0.731	

TABLE 4.43

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND C IN DESIGN #4.7.

A: TYPES OF SCHOOL ATTENDING		C: PARENT'S/GUARDIAN'S EDUCATIONAL STATUS	
Levels	Result	Levels	Result
A_i (C_1)	**	C_k (A_1)	**
$A_1 \sim A_2$	N.S.	$C_1 \sim C_2$	**
$A_1 \sim A_3$	N.S.	$C_1 \sim C_3$	**
$A_1 \sim A_4$	**	$C_2 \sim C_3$	**
$A_2 \sim A_3$	N.S.		
$A_2 \sim A_4$	**	C_k (A_2)	**
$A_3 \sim A_4$	N.S.	$C_1 \sim C_2$	**
		$C_1 \sim C_3$	**
		$C_2 \sim C_3$	*
A_i (C_2)	**		
$A_1 \sim A_2$	N.S.	C_k (A_3)	N.S.
$A_1 \sim A_3$	**		
$A_1 \sim A_4$	**	C_k (A_4)	*
$A_2 \sim A_3$	N.S.	$C_1 \sim C_2$	N.S.
$A_2 \sim A_4$	**	$C_1 \sim C_3$	N.S.
$A_3 \sim A_4$	N.S.	$C_2 \sim C_3$	*

continued on next page ....

Table 4.43 continued....

Levels	Result	Levels	Result
A_i (C_3)	**		
$A_1 \sim A_2$	N.S.		
$A_1 \sim A_3$	*		
$A_1 \sim A_4$	**		
$A_2 \sim A_3$	N.S.		
$A_2 \sim A_4$	**		
$A_3 \sim A_4$	**		

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

Parochial Schools at medium and high levels of Parent's/Guardian's Educational Status but not at the low level.

Two patterns of trend were observed (Table 4.44). One was rise in SPA means as one goes from Public or Private Schools to Parochial and to 'Other' schools. The other was drop in SPA means from low to high Parent's/Guardian's Educational Status in the case of Public and Private schools, no change in Parochial Schools and inconsistent change for 'Other'. Figure 4.6 illustrates the trend.

The comparatively highest SPA means in 'Other' schools, that is, Vocational/Technical and Trades, are probably because the youngsters feel satisfied when they perceive their daily achievements in relation to their chosen life career. The drop in SPA for 'Other' at medium SES is, however, inexplicable.

The lowest SPA means for 'Public' - 'high', and 'Private' - 'high', combinations were expected since highly educated parents/guardians tend to pressure their youngsters to achieve well. In the three types of non-vocational schools compared, Parochial school youngsters reported higher SPA means than in the other two, thus indicating the feeling of more satisfaction they have in actual achievement than those in other schools.

AD interaction: The two variables were (A) Type of School attending and (D) Size of Family. The results of the simple main effects showed three significant F's (Table 4.45) out of six. The three non-significant ones related to sizes of family within all schools but Public.

The trend in variable (A) showed rising SPA means from public

TABLE 4.44

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND C.

C: (196/197) PARENTS'/GUARDIANS' EDUCATIONAL STATUS	A: (193) TYPE OF SCHOOL ATTENDING				
	1.Public	2.Private	3.Parochial	4.Others	
1. Low	$\bar{X}$ = 2.675	$\bar{X}$ = 2.693	2.835	3.226	$\bar{X}$ = 2.708
	N = 970	N = 434	79	53	N = 1536
2. Medium	$\bar{X}$ = 2.408	2.481	2.699	3.042	$\bar{X}$ = 2.456
	N = 2018	851	133	72	N = 3074
3. High	$\bar{X}$ = 2.228	2.314	2.514	3.879	$\bar{X}$ = 2.289
	N = 1427	353	111	33	N = 1924
	N = 4415	1638	323	158	= 6534
	$\bar{X}$ = 2.409	2.501	2.669	3.278	

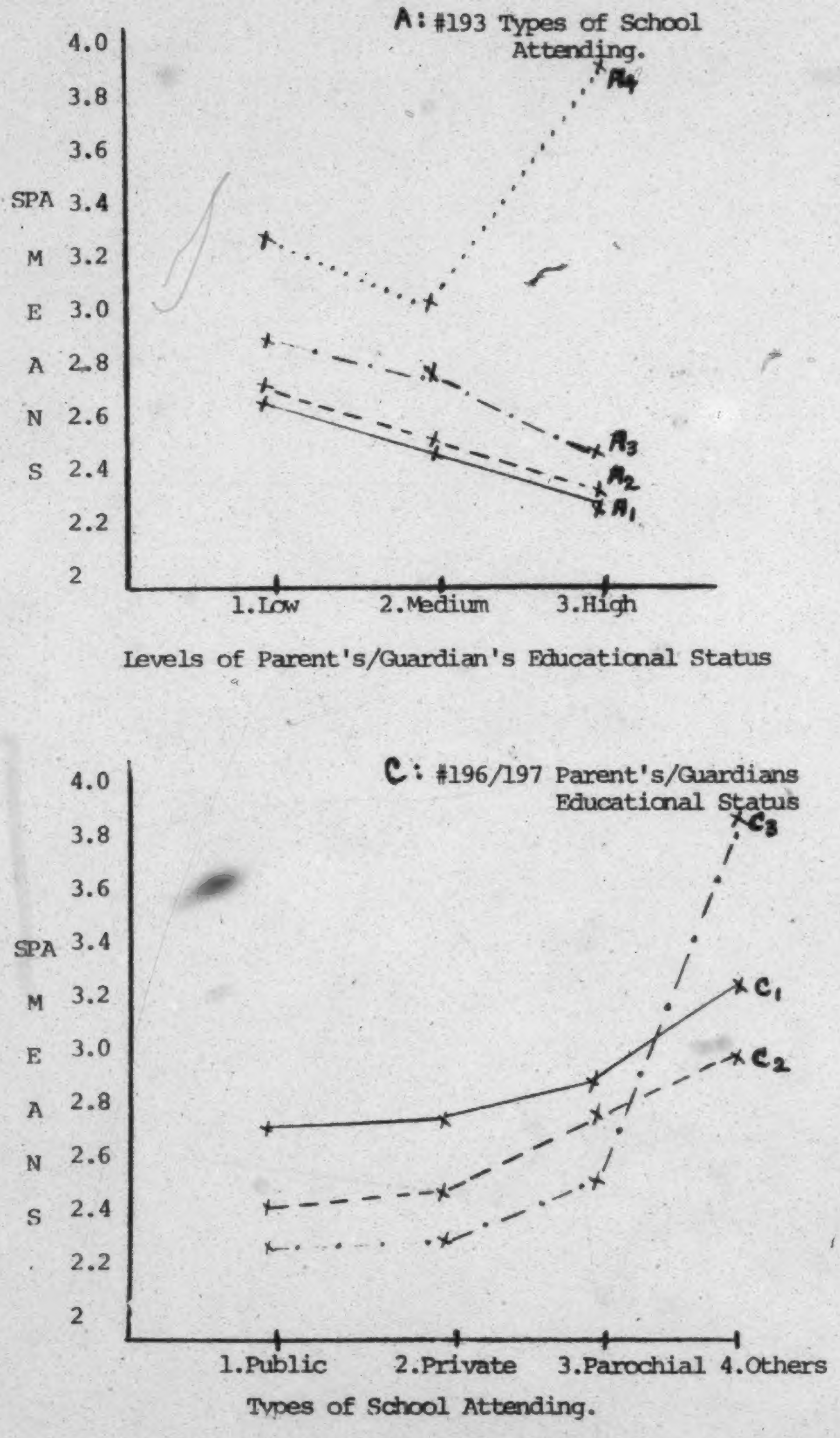

FIGURE 4.6. GRAPHS SHOWING A AND C SIMPLE MAIN EFFECTS.

TABLE 4.45

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND D IN DESIGN #4.7.

A: TYPE OF SCHOOL ATTENDING		D: SIZE OF FAMILY	
Level	Result	Level	Result
A_i (D_1)	**	D_m (A_1)	**
$A_1 \sim A_2$	N.S.		
$A_1 \sim A_3$	**		
$A_1 \sim A_4$	**	D_k (A_2)	N.S.
$A_2 \sim A_3$	N.S.		
$A_2 \sim A_4$	**		
$A_3 \sim A_4$	*	D_k (A_3)	N.S.
A_i (D_2)	**		
$A_1 \sim A_2$	N.S.	D_m (A_4)	N.S.
$A_1 \sim A_3$	*		
$A_1 \sim A_4$	**		
$A_2 \sim A_3$	N.S.		
$A_2 \sim A_4$	**		
$A_3 \sim A_4$	**		

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

to — Others for both small and large families. When one takes factor D, however, SPA is lower for youths from small families in public schools only, there being no difference for other types of schools. (Table 4.46). The combination of 'small' family and 'Public Schools' showed the lowest SPA, indicating how those youngsters are associated with parental and school pressure to achieve. Curiously enough, SPA is the highest for the combination of 'small family' and 'Other schools', probably indicating how well satisfied such youngsters are in trade schools.

DESIGN # 4.8.

The four factors in this design were:

A. (190) Religiosity of Youths.

B. (193) Type of School Attending.

C. (198) Drug (including Alcohol) Usage, called Drug Usage for the sake of brevity.

D. (DENOMINATION) or Religious Affiliation.

Among the eight of the ten null hypotheses rejected were four interactions - AB, AC, BC and CD (Table 4.47).

AB interaction: The variables involved here were (A) Religiosity of Youths and (B) Type of School Attending.

The seven significant F's out of the eight possible simple main effects, and the ten significant F's out of twenty-seven contrasts tested are presented in Table 4.48. The only simple main effect which

TABLE 4.46

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND D.

A: (193) TYPE OF SCHOOL ATTENDING.

D: SIZE OF FAMILY		1.Public	2.Private	3.Parochial	4.Others	
	1. ≥3children (Large)	$\bar{X}$ = 2.460 N = 1930	$\bar{X}$ = 2.521 N = 1064	2.714 185	3.082 85	$\bar{X}$ = 2.510 N = 3264
	2. <3children (Small)	$\bar{X}$ = 2.369 N = 2485	2.465 574	2.609 138	3.507 73	$\bar{X}$ = 2.421 N = 3270
		N = 4415 $\bar{X}$ = 2.409	1638 2.501	323 2.669	158 $\bar{X}$=3.278	= 6534

TABLE 4.47

ANOVA FOR DESIGN # 4.8

Source of Variation	Sums of Squares	df	Mean Squares	F (observed)
A. Religiosity of Youths	95.540	2	47.770	65.14**
B. Type of School Attending	120.216	3	40.072	54.64**
C. Drug (including Alcohol) Usage	69.730	2	34.965	47.54**
D. Religious Affiliation	13.718	2	6.857	9.35**
AB Interaction	12.917	6	2.153	2.94**
AC Interaction	9.915	4	2.479	3.38**
AD Interaction	3.753	4	0.938	1.28
BC Interaction	9.925	6	1.654	2.26*
BD Interaction	3.395	6	0.566	0.77
CD Interaction	26.268	4	6.567	8.95**
Error	4762.479	6494	0.733	

TABLE 4.48

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND B IN DESIGN #4.8.

A: RELIGIOSITY OF YOUTHS		B: TYPE OF SCHOOL ATTENDING	
Level	Result	Level	Result
A_i (B_1)	**	B_j (A_1)	**
$A_1 \sim A_2$	*	$B_1 \sim B_2$	N.S.
$A_1 \sim A_3$	**	$B_1 \sim B_3$	N.S.
$A_2 \sim A_3$	**	$B_1 \sim B_4$	**
		$B_2 \sim B_3$	N.S.
A_i (B_2)	**	$B_2 \sim B_4$	**
$A_1 \sim A_2$	N.S.	$B_3 \sim B_4$	**
$A_1 \sim A_3$	**		
$A_2 \sim A_3$	**	B_j (A_2)	**
		$B_1 \sim B_2$	**
A_i (B_3)	**	$B_1 \sim B_3$	**
$A_1 \sim A_2$	N.S.	$B_1 \sim B_4$	**
$A_1 \sim A_3$	N.S.	$B_2 \sim B_3$	N.S.
$A_2 \sim A_3$	**	$B_2 \sim B_4$	**
		$B_3 \sim B_4$	N.S.
A_i (B_4)	N.S.		
		B_j (A_3)	**
		$B_1 \sim B_2$	N.S.
		$B_1 \sim B_3$	**
		$B_1 \sim B_4$	**
		$B_2 \sim B_3$	N.S.
		$B_2 \sim B_4$	**
		$B_3 \sim B_4$	**

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

gave a non-significant F was for Religiosity of Youths in 'Other' schools - $A_i(B_4)$. Significant F's were observed for all the contrasts on Religiosity in Public Schools. For Private and Parochial schools however, it was not always so. For instance, for Religiosity of Youths, no significant F's occurred for differences between 'Private' and 'Other' schools, $A_1(B_{2-3})$, $A_2(B_{2-3})$ and $A_3(B_{2-3})$, respectively, meaning thereby, that the SPAs for these two types of schools were not different at any level of Religiosity.

Considering variable A (Religiosity of Youths), as its level increased, SPA means dropped for Public, Private and Other schools; but the pattern for Parochial schools showed a rise from low to medium, and a drop from medium to high Religiosity (Table 4.49). Where the SPA means dropped in this factor, it indicates more dedication to a purpose including achievement-striving, hence the lower SPA's in most schools.

As far as the type of schools are concerned, as one goes from 'Public' to 'Other' schools, SPA seems to increase for 'medium' and 'high' levels of religiosity, but for level 'low', there is a slight drop in the SPA for 'Parochial' schools. This drop is non-significant, however.

The 'High Religiosity-Public', combination (Table 4.49) has the lowest SPA and the next to it in size is for 'High Religiosity-Private'. It appears that 'high' level of Religiosity' may be reflecting the dedication of youths toward achievement-striving in both Public and Private schools. The highest SPA is for 'Low Religiosity-Other' school

TABLE 4.49

MEANS AND SAMPLE SIZES FOR DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND B.

		A: (190) RELIGIOSITY OF YOUTHS			
		1.Low	2.Medium	3.High	
B. (193) TYPE OF SCHOOL ATTENDING.	1.Public	$\bar{X}$=2.621	2.480	2.354	$\bar{X}$ = 2.409
		N = 517	832	3066	N = 4415
	2.Private	$\bar{X}$=2.848	2.763	2.424	$\bar{X}$ = 2.501
		N = 151	186	1301	N = 1638
	3.Parochial	$\bar{X}$=2.743	3.093	2.560	$\bar{X}$ = 2.669
		N = 35	54	234	N = 323
	4.Others	$\bar{X}$=3.683	3.288	3.015	$\bar{X}$ = 3.278
		N = 41	52	65	N = 158
		744	1124	4666	= 6534
		$\bar{X}$=2.731	2.593	2.393	

cell which is the reverse religiosity. No explanation seems available for the highest SPA in the 'Medium Religiosity-Parochial' cell as compared to other levels of Religiosity for such schools.

AC interaction: The variables were: (A) Religiosity of Youths, and (C) Drug Usage.

Five significant F's were observed among the six possible simple main effects. Also, eleven significant F's occurred among the fifteen contrasts examined (Table 4.50). The highlights observed in the simple main effects and contrasts are:

(1) the non-significant F in Religiosity of Youth. in the 'medium' Drug Usage, i.e. $A_i(C_2)$ simple main effect.

(2) the non-significant F's between 'medium' and high Drug Usage in 'medium' and 'high' Religosity - $C_{2-3}(A_2)$, and $C_{2-3}(A_3)$, respectively.

This indicates that the SPA does not change for these two extreme levels for either factor. In practical terms, 'medium' and 'high' Drug Usage and also 'medium' and 'high' Religiosity of Youths here can be treated alike. Since the distinction in this case between 'medium' and 'high' on either factor is meaningless (giving all four non-significant F's) (Table 4.51). Omitting it, one can see two clear trends whereby SPA seems to decrease on factor A for each level of Drug Usage, thus indicating its association with dedication for a purpose, in this case, achievement-striving.

The lack of significant F's between 'medium' and 'high' Drug Usage at the 'medium' and 'high' levels (but not 'low') of Religiosity, is noteworthy. It implies that when once drugs and alcohol have been

TABLE 4.50

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS A AND C IN DESIGN #4.8.

A: RELIGIOSITY OF YOUTHS.		C:DRUG (INCLUDING ALCOHOL) USAGE.	
Level	Result	Level	Result
A_i (C_1)	**	C_k (A_1)	**
$A_1 \sim A_2$	N.S.	$C_1 \sim C_2$	**
$A_1 \sim A_3$	**	$C_1 \sim C_3$	**
$A_2 \sim A_3$	**	$C_2 \sim C_3$	**
A_i (C_2)	N.S.	C_k (A_2)	**
		$C_1 \sim C_2$	**
A_i (C_3)	*	$C_1 \sim C_3$	*
$A_1 \sim A_2$	*	$C_2 \sim C_3$	N.S.
$A_1 \sim A_3$	*		
$A_2 \sim A_3$	N.S.	C_k (A_3)	**
		$C_1 \sim C_2$	**
		$C_1 \sim C_3$	**
		$C_2 \sim C_3$	N.S.

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

TABLE 4.51

MEANS AND SAMPLE SIZES OF DIFFERENT COMBINATIONS OF LEVELS OF FACTORS A AND C.

		A: (190) RELIGIOSITY OF YOUTHS.			
		1.Low	2.Medium	3.High	
C:(198) DRUG (INCLUDING ALCOHOL) USAGE.	1.Low	$\bar{X}$=2.638	2.540	2.373	$\bar{X}$ = 2.427
		N = 621	1012	4509	N = 6142
	2.Medium	$\bar{X}$=3.012	3.139	2.944	$\bar{X}$ = 3.019
		N = 85	72	107	N = 264
	3.High	$\bar{X}$=3.632	2.975	2.980	$\bar{X}$ = 3.172
		N = 38	40	50	N = 128
		N = 744	1124	4666	= 6534
		$\bar{X}$=2.731	2.593	2.393	

used by youngsters at the 'medium' level it could be as grave as using at 'high' level. The attention of teachers and parents should be drawn to this phenomenon.

The L-H combination (Low Religiosity - High Drug Usage) suggests lack of dedication on one hand and living in a world of unreality and fantasy on the other.

The highest SPA mean for this combination was, therefore, anticipated. On the other hand, the H-L or the reverse combination is associated with high dedication, without drugs blurring the youngster's perception of actual achievement. For it, the lowest SPA mean was expected. The data actually satisfied both the expectations.

BC interaction: The variables involved here were (B) Type of School Attending, and (C) Drug Usage. Table 4.52, shows that there were four significant F's among the six possible simple main effects and eleven significant F's for the twenty-one contrasts examined. Two interesting non-significant F's emerged. They were

(i) for 'medium' Drug Usage in all types of schools - $B_j(C_2)$ and

(ii) for all levels of Drug Usage for Parochial schools - $C_k(B_3)$.

Increase in SPA means was observed as one goes from Public to Private, etc. schools, particularly, in the low level of 'Drug Usage'. It seems that SPA's are not different for any type of school when Drug Usage is 'medium or 'high', (C_2-C_3) nonsignificance at B_1, B_2, and B_3 and B_4. For all partical purposes, therefore, medium-high distinction on Drug Usage can be ignored and the factor C treated as if it had only two levels. For each type of

TABLE 4.52

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS-FACTORS B AND C IN DESIGN #4.8.

B: TYPE OF SCHOOL ATTENDING. C: DRUG USAGE.

Level	Result	Level	Result
B_j (C_1)	**	C_k (B_1)	**
$B_1 \sim B_2$	**	$C_1 \sim C_2$	**
B_1 B_3	**	$C_1 \sim C_3$	**
$B_1 \sim B_4$	**	$C_2 \sim C_3$	N.S.
$B_2 \sim B_3$	N.S.		
$B_2 \sim B_4$	**	C_k (B_2)	**
$B_3 \sim B_4$	**	$C_1 \sim C_2$	**
		$C_1 \sim C_3$	N.S.
B_j (C_2)	N.S.	$C_2 \sim C_3$	N.S.
B_j (C_3)	*	C_k (B_3)	N.S.
$B_1 \sim B_2$	N.S.		
$B_1 \sim B_3$	N.S.	C_k (B_4)	*
$B_1 \sim B_4$	*	$C_1 \sim C_2$	N.S.
$B_2 \sim B_3$	N.S.	$C_1 \sim C_3$	*
$B_2 \sim B_4$	*	$C_2 \sim C_3$	N.S.
$B_3 \sim B_4$	N.S.		

Note: *Probability of $F \leq .05$ but $> .01$.
**Probability of $F \leq .01$.

school, SPA increased with these two 'effective' levels of Drug Usage implying that the youngster feels a false sense of satisfaction if he is given to Drug Usage (Table 4.53).

Here again, highest SPA occurs for 'Other' schools when Drug Usage also is 'high'. This is so probably because the youngsters, in addition to feeling satisfied with their actual achievement in a trade school, also live in a 'peripatetic' world of their own if they are 'high' in Drug Usage. (Boyd, 1970; Falstein, 1953; and MacKay, 1965).

CD interaction: The variables were (C) Drug (including Alcohol) Usage, and (D) Denomination - Religious Affiliation.

Five of the six simple main effects showed significant F's. Eleven significant F's were observed among fifteen contrasts examined (Table 4.54). In both Catholic and Protestant affiliations, significant F's occurred between the low and high levels of Drug Usage.

In Table 4.55, increase in Drug Usage was associated with rise in SPA means in all religious deonominations. The highest SPA means were observed in

(i) Catholic youngsters with 'high' Drug Usage, and

(ii) Protestants with 'medium' Drug Usage.

It was also observed that Catholic youngsters differed significantly in SPA from any other Religious Denomination at the low level of Drug Usage, $D_{1-2}, D_{1-3}(C_1)$. In high Drug Usage, none of the denominations showed any significant differences in SPA, $D_m(C_3)$.

TABLE 4.53

MEANS AND SAMPLE SIZES OF DIFFERENT COMBINATIONS OF LEVELS OF FACTORS B AND C.

		B: (193) TYPE OF SCHOOL ATTENDING				
		1.Public	2.Private	3.Parochial	4.Others	
C: (198) DRUG (INCLUDING ALCOHOL) USAGE.	1.Low	$\bar{X}$=2.383	2.480	2.615	3.065	$\bar{X}$ = 2.427
		N =4242	1538	270	92	N = 6142
	2.Medium	$\bar{X}$=3.019	2.816	2.949	3.413	$\bar{X}$ = 3.019
		N = 103	76	39	46	N = 264
	3.High	$\bar{X}$=3.100	2.875	2.929	3.950	$\bar{X}$ = 3.172
		N = 70	24	14	20	N = 158
		N = 4415	1638	323	158	= 6534
		$\bar{X}$=2.409	2.501	2.669	3.278	

TABLE 4.54

RESULTS OF ANALYSIS OF SIMPLE MAIN EFFECTS OF LEVELS OF FACTORS C AND D IN DESIGN #4.8.

C: DRUG(INCLUDING ALCOHOL) USAGE		D: DENOMINATION (RELIGIOUS AFFILIATION)	
Level	Result	Level	Result
C_k (D_1)	**	D_m (C_1)	**
$C_1 \sim C_2$	**	$D_1 \sim D_2$	**
$C_1 \sim C_3$	**	$D_1 \sim D_3$	**
$C_2 \sim C_3$	N.S.	$D_2 \sim D_3$	N.S.
C_k (D_2)	**	D_m (C_2)	**
$C_1 \sim C_2$	**	$D_1 \sim D_2$	*
$C_1 \sim C_3$	**	$D_1 \sim D_3$	N.S.
$C_2 \sim C_3$	N.S.	$D_2 \sim D_3$	*
C_k (D_3)	**	D_m (C_3)	N.S.
$C_1 \sim C_2$	**		
$C_1 \sim C_3$	**		
$C_2 \sim C_3$	*		

Note: *Probability of $F < .05$ but $> .01$
**Probability of $F < .01$.

TABLE 4.55

MEANS AND SAMPLE SIZES OF DIFFERENT COMBINATIONS OF LEVELS OF FACTORS C AND D.

		C:(198) DRUG(INCLUDING ALCOHOL) USAGE.			
		1.Low	2.Medium	3.High	
D: (DENOMINATION) RELIGIOUS AFFILIATION.	1.Catholics	$\bar{X}$=2.523	2.880	3.320	$\bar{X}$ = 2.552
		N =1741	92	25	N = 1858
	2.Protestants	$\bar{X}$=2.380	3.302	3.097	$\bar{X}$ = 2.424
		N =3013	106	62	N = 3181
	3.Others	$\bar{X}$=2.411	2.758	3.195	$\bar{X}$ = 2.448
		N =1388	66	41	N = 1495
		6142	264	128	= 6534
		$\bar{X}$=2.427	3.019	3.172	

This result in general suggests how a type of Religious Affiliation has some bearing upon the youngsters' SPA and to Drug Usage. The lowest SPA mean observed among Protestants with 'low' Drug Usage indicates how the parents' achievement-orientation reflects on the youngsters and hence the expected result, that is, 'low' Self-Perceived Achievement (SPA) mean.

PEARSON PRODUCT MOMENT CORRELATIONS: AN ANCILLIARY ANALYSIS.

As additional analysis, Pearson product moment correlations (r's) were calculated between the 'criterion' (SPA) and each of the 28 'independent' variables.

The results (Table 4.56) are presented after arranging the r's from high positive to high negative. The main purpose of this was essentially to satisfy curiosity and to see at a glance the magnitude of the correlation of each variable with SPA.

Examining the correlations for statistical significance when the sample size is as large as 6534 is meaningless since even a very small r (that is one giving less than one-percent overlap between the two variables concerned) turns out to be significant (Best, 1970). It was also observed that the highest r gave only sixteen-percent and the lowest, less than one-percent overlap.

TABLE 4.56

SHOWING MAGNITUDE OF CORRELATIONS BETWEEN EACH OF THE 28 VARIABLES AND SELF PERCEIVED ACHIEVEMENT (SPA).

Order of Magnitude	Variable	Interpretation	Correlation with SPA
1	6	Academic Problems	0.391**
2	22	#198-Drug (incl. Alcoh.) Usage	0.168**
3	3	Family Pressure	0.157**
4	2	Parental Understanding	0.151**
5	20	#193-Type of School Attending	0.142**
6	1	Family Unity	0.064**
7	28	#202-Family Unit	0.061**
8	11	National Issues	0.040**
9	5	Lack of Self-Confidence	0.032*
10	8	Classroom Relationship	0.028*
11	25	Age	0.007
12	7	Self Regard	0.005
13	4	Life Partner	0.0007
14	9	Orientation for Change	-0.0005
15	17	Adult Caring	-0.030*
16	23	DENOM. - Rel.Affiliation of Youth	-0.045**
17	27	#214-Size of Family	-0.050**
18	16	Youth Group Vitality	-0.052**
19	14	Maturity of Values	-0.080**
20	10	Personal Faults	-0.087**
21	18	Family Social Concerns	-0.095**
22	24	Sex	-0.109**
23	19	#190-Religiosity of Youths	-0.136**
24	21	#195-Socio-Econ.Status of Parents	-0.143**
25	12	Moral Responsibility	-0.160**
26	13	Meaningful Life	-0.161**
27	26	#196/197-Parents/Guard's. Ed. Status	-0.170**
28	15	Human Relations	-0.255**

Note: *Probability of $r < .05$ but $> .01$.
**Probability of $r < .01$.

TABLE 4.57

INTERCORRELATIONS AMONG SPA AND THE 28 VARIABLES

Variables	SPA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
SPA		06	15	16	00	03	39	00	03	-00	-09	04	-16	-16	-08	-25	-05	-03	-10	-14	14	-14	17	-05	-11	00	-17	-05	06
1			52	40	24	31	30	41	44	18	-12	08	-04	-03	-23	-03	-06	-12	-25	-03	02	-02	04	00	04	03	-07	-06	09
2				35	21	24	26	32	32	17	-16	15	-14	-16	-25	-09	-08	-16	-24	-03	03	-00	10	-03	-00	-03	-05	-03	02
3					13	12	16	16	13	09	-06	15	-05	-12	-23	-08	-07	-14	-25	-12	08	-08	13	-03	04	03	-12	-05	37
4						35	24	42	30	22	-14	01	12	-01	-16	-05	00	-02	-03	02	01	-00	-01	-01	18	05	-07	-00	00
5							36	60	49	15	20	-00	05	-00	-33	-02	-06	-03	-04	00	02	-03	-03	-03	21	00	-05	00	00
6								40	37	16	-16	-00	-03	-10	-25	-18	-01	-01	-07	-03	05	-03	04	01	-04	01	-07	-03	03
7									60	21	-25	02	07	03	-35	02	-03	-06	-06	02	-03	00	-00	07	-12	-00	-00	-02	00
8										19	-21	03	-03	-02	-29	-02	-06	-08	-06	02	00	-00	01	-00	03	-06	-02	-02	00
9											05	27	05	-05	-08	-06	-00	-11	-00	04	06	02	05	-10	-01	04	-02	-03	02
10												-00	20	17	18	11	06	02	06	-01	00	-00	00	-04	04	05	01	02	03
11													-13	-10	-11	17	-11	-24	-11	-12	11	03	15	-10	-03	09	03	-06	05
12														34	17	13	18	16	18	16	-10	03	-10	12	21	06	00	03	-02
13															13	22	13	14	18	13	-12	02	-09	09	27	06	02	04	-03
14																06	17	16	21	09	-04	05	-07	03	00	01	05	03	-03
15																	-01	-09	10	05	-06	12	-07	-04	15	11	16	-04	-07
16																		33	20	16	12	-00	-08	13	00	-05	-00	03	-00
17.																			29	11	-16	-03	-13	12	06	-13	-02	04	-01
18																				14	-04	08	-09	-02	06	-05	11	-01	-08
19																					-01	04	-18	-16	08	-11	-02	-04	-10
20																						-03	19	-49	-09	02	-07	-14	05
21																							-03	06	-03	02	35	01	-04
22																								02	-08	02	-00	-02	08
23																									03	05	14	18	05
24																										-04	-02	00	-00
25																											-05	01	-00
26																												04	-06
27																													-00
28																													

N.B. The decimals before the r's are omitted.

CHAPTER V

SUMMARY, FINDINGS, IMPLICATIONS AND SUGGESTIONS

SUMMARY

The research reported here examined Self-Perceived Achievement (SPA) of high school students in the context of twenty-eight non-cognitive variables.

SPA means here the qualitative self-evaluation by the subject himself, how, in his own view, he feels he is doing in his academic work. It thus implies the result of the youngster's feelings, emotions and other characteristics which he may possibly use in the process of perceiving his academic achievement.

Support for this assumption about SPA came from a pilot study conducted in Edmonton (Canada), the details of which are given in Appendix A. Empirically speaking, SPA was the subject's answer to Question #189 in the Youth Research Survey (Strommen and Gupta, 1971), which runs thus:

> Which of the following best describes the kind of grades or marks you get at school?
>
> A. Excellent grades (5)
> B. Above Average grades (4)
> C. Average grades (3)
> D. Below Average grades (2)
> E. Very low grades (1)

For the purpose of analysis, the above responses were translated to the numbers given at the right within parentheses.

The twenty-eight variables in question were selected from Youth Research Centre Survey. They are:

Variable #	YRC Scale #	Categories and Scales	No. of Items
		I. FAMILY AND INTERACTIONAL MODES	
1	1	Family Unity	10
2	2	Parental Understanding	9
3	3	Family Pressures	7
18	24	Family Social Concerns	8
		II. SELF ESTEEM OR SELF REGARD	
5	5	Lack of Self-Confidence	8
7	7	Personal Faults	12
10	12	Maturity of Values	7
12	14	Moral Responsibility	10
14	18	Self Regard	13
16	22	Youth Group Vitality	10
17	23	Adult Caring	11
		III. WITHIN SCHOOL PROBLEMS	
6	6	Academic Problems	9
8	8	Classroom Relationship	15
		IV. SELF AND SOCIAL INTERACTION	
4	4	Life Partner	7
9	9	National Issues	11
11	13	Orientation for Change	11
13	15	Meaningful Life	17
15	19	Human Relations	12

Variable #	Socio-Biographical Variables	Survey Item #
19	(i) Sex: 1. Male 2. Female	Personal Data
20	(ii) Age: 15, 16, 17, 18 years	Personal Data
21	(iii) Socio-Economic Status of Parents - 1. Low, 2. Medium, 3. High.	195
22	(iv) Religiosity of Youths: 1. Low, 2. Medium, 3. High	190
23	(v) Religious Affiliation of Youths:1.Catholic 2.Protestant, & 3. Others.	Personal Data
24	(vi) Parent's/Guardian's Educational Status: 1. Low, 2. Medium, 3. High.	196 & 197
25	(vii) Drug(including Alcohol) Usage: 1. Low, 2. Medium, 3. High.	198
26	(viii) Family Unit: 1. Separated Parents 2. Unseparated	202
27	(ix) Type of School Attending: 1.Public, 2.Private, 3.Parochial, 4. Others.	193
28	(x) Size of Family: 1. Large 2. Small	214

The scores obtained from the responses to the first eighteen variables (or scales), were transformed to T-scores (mean = 50, standard deviation = 10). T-scores of 56 and over were called 'High', those from 46 to 55 inclusive 'Medium', and the rest 'Low'. The ten socio-biographical variables were classified as already given above.

The sample came from the population of high school students in 1969/70 in the USA. It comprised 6,534 students largely collected from religiously sponsored Youth Clubs and Organizations and some from non-sectarian clubs.

The sample was procured by using multi-stage-proportionate-random sampling technique.

Twelve factorial designs, each of which contained two, three, or four factors were used. The data were examined through Analysis of Variance (ANOVA). The analyses ignored higher order interactions and limited themselves to the first order interactions, simple and overall main effects. Contrasts were examined where necessary.

Pearson roduct oment correlations were also calculated between SPA and each of the twenty-eight variables as a matter of curiosity.

The steps in the analytical procedure are given in the Flow Chart (Figure 4.1). The following salient points are worth reiterating:

(i) All possible first order interactions were examined first.

(ii) If a factor did not occur in an interaction, the result related to its overall main effect was looked at. Scheffé's contrasts were used to compare any two possible levels in the factor.

(iii) If a factor participated in a significant interaction, its simple main effects were examined for all its levels, taking each level of the second or interacting factor, and vice versa.

Whenever the F for a simple main effect was significant, Scheffé's contrasts were examined, provided the factor had more than two levels.

The data were analyzed, using IBM 360/67 at the University of Alberta.

FINDINGS AND THEIR IMPLICATIONS.

The main findings of the study are given below, generally with a brief mention of explanation and likely implications. For this purpose, each design is taken separately.

1. Design #2.1.

A (6) Academic Problems B (8) Classroom Relationship

AB interaction was significant. The cross-tabulation of SPA means for the various levels of the two factors showed that as the levels of (A) Academic Problems rose, SPA also increased. The reverse was true about (B) Classroom Relationship, however (Table 4.3).

The lowest SPA was found for the combination 'low' Academic Problems and 'high' Classroom Relationship. Similarly, the highest SPA was seen for 'high' Academic with 'low' Classroom Relationship cell.

It seems that when a youngster has low concern about academic problems and, at the same time, is good in classroom relationship, he tends to be motivated to strive the hardest to achieve, so that his achievement seems to him to be less satisfying and, therefore, his reported SPA is low.

2. Design #2.2.

A. (13) Meaningful Life B. (15) Human Relations

There was no interaction. Both of the factors gave significant overall main effects.

A. Meaningful Life: At the 'low' level of this factor, SPA was the highest and it decreased as the level of the former rose (Table 4.5). It indicates that when the subject has low score on Meaningful Life (indicating self-centredness), it evokes some contrasting life style which is not conducive to a feeling of achievement-striving and, hence, the high SPA. The lowest SPA, found in 'high' Meaningful Life, is true of the opposite indications.

B. Human Relations: A similar trend (SPA dropping with increase in level of the factor) was also observed for (B) Human Relations (Table 4.5). It seems that when youths are low on Human Relations, they tend to report high SPA, giving some evidence of their incapability to perceive their actual achievement realistically. Similarly, when youths are high on human relations, they seem to be committed to the principle of equality of all men before God and are therefore, sometimes distracted from themselves. They are probably less achievement-oriented and, therefore, report very high SPA.

3. Design #3.1

A (12) Moral Responsibility B (16) Youth Group Vitality

C (17) Adult Caring

There was no interaction here. The only significant overall main effect was for (A) Moral Responsibility. Increase in the level of this factor was accompanied by a downward trend in SPA (Table 4.7) so that the lowest SPA was for 'high' Moral Responsibility. It indicates that when youngsters are low on moral responsibility, that is, resort to 'privatism' (minding one's self alone), they do not relate their achievement to a specific goal, and so perceive their achievement as satisfying, and report high SPA. Whereas those who are high on moral responsibility, which involves maintaining a high stance of becoming involv[illegible] helping others, tend to strive for further achievements, and therefore, perceive their grades as less satisfying, and so the lowest SPA.

4. Design #3.2

A. (4) Life Partner B. (9) National Issues

C. (11) Orientation for Change.

The result showed presence of interaction - BC.

The level-wise cross-tabulations (Table 4.10) showed inconsistent trend in SPA. The difference between the highest and the lowest cell entries is not very large, albeit significant. No useful inference could, therefore, be drawn from this design.

5. Design #4.1

It contained: A. (1) Family Unity B. (2) Parental Understanding

C. (3) Family Pressure D. (18) Family Social Concerns.

Two significant interactions - AC and BC, were found, so was the overall main effect due to factor D.

(i) (A) Family Unity and (C) Family Pressure Interaction

The level-wise cross-combination (Table 4.13) did not show a clear trend in SPA along Family Unity. There was an increasing trend along Family Pressure, however. Also, the Low-Low cell contained the lowest SPA, and the medium-high cell, the highest.

The youth in the Low-Low cell came typically from families with relatively cordial atmosphere, combined with low family pressure. Under such an influence, the youngsters would probably relate mostly to their parents, be influenced by the family expectations and, thereby, tend to be achievement striving, and to report low SPA.

(ii) (B) Parental Understanding and (C) Family Pressure Interaction.

Level-wise cross-tabulation related to BC interaction showed that whenever the levels of either factor increased, so did SPA (Table 4.15). The Low-Low cell contained the lowest SPA, and the 'High-High' the highest. In the former cell, youngsters enjoyed high cordiality and good communication between themselves and their parents as well as low family anxieties and problems. Such youngsters would like to satisfy the parents' expectations for them to achieve and therefore tended to report low SPA. The reverse held true for those in the 'high-high' cell.

(iii) Family Social Concerns (overall main effect)

As the levels of Family Social Concerns became higher, SPA dropped, though not-significantly (Table 4.16). The low level of this factor implies relative lack of concerns of parents about social issues and is associated to higher SPA.

6. Design #4.2

A. (5) Lack of Self Confidence B. (7) Personal Faults

C. (10) Maturity of Values D. (14) Self Regard

Two of the six interactions (BC and BD) were significant, so was the main effect for factor A.

(i) (B) Personal Faults and (C) Maturity of Values Interaction:

SPA's in the combinations of the levels of factors B and C did not show any consistent trend except for decreasing SPA when levels of factor C increased as one considers 'low' level of factor B. Not much useful information can be inferred from the results, therefore.

(ii) (B) Personal Faults and (D) Self Regard Interaction

SPA means dropped as Self Regard levels increased for each level of Personal Faults. The same was not true for the SPA as levels of Personal Faults increased when we take each level of Self Regard.

It is essential, however, that the youngster should gain in Self Regard. Personal Faults which also indicates self criticism and self awareness are necessary to enhance a realistic self-perception of achievement. School teachers and counsellors should, therefore, provide opportunities for youth to develop self-criticism and self-acceptance, by certain 'significant others' accepting the youth to accept himself. It is a reflective behaviour. Without these qualities youngsters could delude themselves with a feeling of pre-emptive satisfaction in their achievement.

(iii) Lack of Self Confidence (Overall Main Effect)

The SPA means for the low and the medium levels of this factor are identical, hence this factor could be rationally considered to be of two distinct classifications. Increase in SPA from one to the other was significant (Table 4.22).

The high level of Lack of Self Confidence involves anxiety to please others due to fear of making mistakes, uneasiness in group situations, and over-eagerness to avoid embarrassing situations. This state of extreme self consciousness in youths seems unsuitable for the emotional stability required for students to concentrate on achievement, and hence high SPA. With little self-confidence, the youngster could perceive whatever achievement he makes, even low can, therefore, be satisfying.

7. Design #4.3

A. (195) Socio-Economic Status of Parents. (B) Sex

C. Age D. (196/197) Parent's/Guardian's Educational Status

There were three significant interactions found in the results of this design, viz., AB, AD, and BC.

(A) Socio-Economic Status of Parents and (B) Sex Interaction

In the cross-classification of the combinations of the levels of both factors (Table 4.25), SPAs for both Males (Boys) and Females (Girls) dropped significantly with increase in SES of Parents. However, for each level of SES of Parents, Boys were significantly higher than Girls in SPA, indicating that boys probably tend to be less achievement-oriented than girls at all the levels of SES. This inference is contrary to the existing notion that Boys who are supposed to be future 'breadwinners' for the family are more achievement seeking.

The lowest SPA was found for Girls at - 'high' SES level, that is for those who are generally under parental pressure to achieve so as to maintain the family traditions. The highest SPA, on the other hand, was observed for Boys at 'low' SES level. This is mainly due to the fact that the financial and emotional support from parents is probably lacking so that whatever the actual achievement, it seems to be satisfying.

(ii) (A) Socio-Economic Status of Parents and (D) Parent's/ Guardian's Educational Status Interaction.

In the levels of the two factors, SPA means were observed to be sometimes dropping, sometimes increasing, thereby showing a clearly irregular trend. The lowest SPA was in the H-H cell, and highest in the L-L combination (Table 4.27).

It would be recalled that the higher levels of both the factors are associated to relatively high motivation, inspiration, support, and parental pressure on youngsters to achieve. The reverse would be true for 'low' levels.

(iii) (B) Sex and C. Age Interaction

The SPA tended to be lower for girls than for boys at each of the four ages. However, as the age increased, the trend was not consistent. Occasional age-related differences existed for boys but never for girls. Age-wise SPA was rising and dropping for boys but not for girls who showed no significant differences.

8. Design #4.4

A. (195) Socio-Economic Status of Parents B. (202) Family Unit. C. (196/197) Parent's/Guardian's Educational Status. D. Size of Family.

Interaction AC was significant, so were the overall main effects due to B and D respectively.

The former has already been dealt with in Design #4.3 (as interaction AD).

(B) Family Unit - Overall Main Effect.

SPA for youngsters from separated families was significantly higher than that for those from unseparated families (Table 4.31). It seems that those living with one parent have lower motivation to achieve and less emotional support from their single parent so that they tend to view their achievement as satisfactory.

(D) Size of Family - Overall Main Effect.

Youngsters from 'large' families showed higher SPA than those from 'small' families (Table 4.31). It seems that the youngsters from large families are less prone to achievement-striving, probably due to inadequate emotional and motivational support.

9. Design #4.5

A. (190) Religiosity of Youths B. (195) Socio-Economic Status of Parents. C. Denomination (Religious Affiliation). D. (196/197) Parent's/Guardian's Educational Status.

Three highly significant interactions, AB, AC, and BD, were observed in the results of this design. Interaction BD has already been treated in Design #4.3 (as interaction AD), the remaining ones are discussed here.

(i) (A) Religiosity of Youths and (B) SES of Parents Interaction.

On both, the SPA had a downward trend, that is, with rise in their levels, SPA dropped. Lowest SPA was found in the H-H cell, and the highest in the L-L cell (Table 4.34).

It seems that the youngsters who are highly dedicated (high on Religiosity), and come from parents with high SES perceive their achievement less satisfying (challenge not well responded to) and, therefore, report low SPA. The reverse is true of the youngsters in the Low-Low (L-L) combination.

(ii) (A) Religiosity of Youths and (C) Denomination (Religious Affiliation) Interaction.

On the first factor - A, SPA means dropped as the level of the factor rose. This applied to all the three types of denominations: Catholics, Protestants, 'Others'. It seems that the youngsters who are less dedicated to a purpose could be less achievement-oriented, so report high SPA.

10. Design #4.6

A. (195) Socio-Economic Status of Parents, B. (202) Family Unit, C. (198) Drug Usage, D. (204) Size of Family.

There were two significant interactions in this design, viz., (i) AB and (ii) CD, respectively.

(i) (A) Socio-Economic Status of Parents and (C) Family Unit Interaction.

Taking factor B, one could say that the SPA mean for the youngsters from separated families was higher than that of their counterparts from unseparated ones at each SES level. This is true only for low and medium SES levels, but not for the 'high' SES (Table 4.39).

Youngsters from the combination of 'low' SES and 'separated families' reported the highest SPA, probably because they perceive their actual achievement as pre-eminently satisfying in the absence of motivation and financial support. This is further substantiated by the fact that the SPA is the lowest for youths from the combination of 'unseparated families' and 'high' SES.

(ii) (C) Drug Usage and (D) Size of Family Interaction.

SPA trend tended to be inconsistent (Table 4.41). For example, in 'large' and 'small' families, as Drug Usage increased, so did SPA, even though the increase in one case was not significant. With regard to Family Size, SPA dropped significantly from 'large' to 'small' families only for 'low' Drug Usage. SPA rose significantly from 'large' to 'small' families in both 'medium' and 'high' Drug Usage.

11. Design #4.7

A. (193) Type of School Attending. B(195) Socio-Economic Status of Parents C. (196/197) Parent's/Guardian's Educational Status. D. (214) Size of Family.

The significant interactions were AC, AD, and BC. The last interaction has already been dealt with in Design #4.3 (as interaction AD).

The discussions on the remaining two are summarized here.

(i) (A) Type of School Attending and (C) Parent's/Guardian's Educational Status Interaction.

Two patterns of trends were observed here (Table 4.46). One was rise in SPA means as one goes from Public or Private to 'Other' schools. The other was a drop in SPA means from 'low' to 'high' on Parent's/Guardian's Education in the case of Public and Private schools, no change in Parochial schools, and inconsistent change for 'Others'. Highest SPA mean was found for Youngsters in the combination of 'Other' schools (Vocational/Trades) and also from 'high' Parent's/Guardian's Educational Status, showing signs of satisfaction in youngsters.

The lowest SPA mean was in the two combination cells of Public-'high', and Private-'high' Parent's/Guardians Educational Status. This is probably due to the achievement orientation of the type of school combined with the parental motivation.

(ii) (A) Type of School Attending and (D) Size of Family Interaction.

SPA rose from Public to 'Other' school, for both 'small' and 'large' families. Only in Public schools, SPA for youngsters from 'small' families is lower than that of those from 'large' families. There was no significant difference in SPAs for Youths from other types of schools (Table 4.46).

The combination of 'small' family and 'Public schools' showed the lowest SPA mean. Curiously enough, SPA is the highest for youths from 'small' family and 'Other' schools, probably indicating how well satisfied such youngsters are in trade schools.

12. Design #4.8

A. (190) Religiosity of Youths B . (193) Type of School Attending. C. (198) Drug Usage. D. Denomination (Religious Affiliation).

Four significant interactions were observed, (i) AB, (ii) AC, (iii) BC and (iv) CD.

(i) (A) Religiosity of Youths. (B) Type of School Attending Interaction.

Considering factor A (Religiosity of Youths), as its level increased, SPA means dropped for Public, Private and Other schools; but the pattern for Parochial schools showed a rise from 'low' to 'medium', and a drop from 'medium' to'high' Religiosity (Table 4.49).

In factor B (Type of School Attending), as one moves from Public to Other schools, SPA seems to rise for 'medium' and 'high' levels of religiosity, but a slight, non-significant drop in SPA was observed for Parochial schools. The 'high' Religiosity-Public School cell had the lowest SPA,and the 'low' Religiosity-'Other' school the reverse, indicating high dedication in the former, and vice versa.

(ii) (A) Religiosity of Youths and (C) Drug Usage Interaction.

The lack of significant F's between 'medium' and 'high' Drug Usage at the 'medium' and'high' levels (but not 'low') of Religiosity is noteworthy. It shows that 'medium' Drug Usage is as grave as 'high'. The L-H combination (Low Religiosity-High Drug Usage) showing the highest SPA suggests lack of dedication of the Youths on the one hand, and their living in a world of unreality and fantasy on the other. On the contrary, the H-L cell was the reverse condition and hence, the lowest SPA mean.

(iii) (B) Type of School Attending and (C) Drug Usage Interaction.

Increase in SPA means was observed as one goes from Public to Private, etc., schools, particularly in the 'low' Drug Usage level. SPA differences were not observed between 'medium' and 'high' Drug Usage, thus indicating similarity in the two levels.

Highest SPA mean is observed for 'high' Drug Usage in 'Other' schools, and the lowest SPA for Low Drug Usage in Private Schools. The former type of youngsters indicates high achievement orientation, and the latter the reverse.

(iv) (C) Drug Usage and (D) Denomination (Religious Affiliation) Interaction.

The result in general suggests how a type of Religious Affiliation combined with Drug Usage could be associated with youngsters' SPA. The lowest SPA was observed for Protestants with 'low' Drug Usage, which indicates how the parents' achievement-orientation reflects on the youngster realistically with less drug influence.

PEARSON PRODUCT MOMENT CORRELATIONS: AN ANCILLIARY ANALYSIS.

Pearson Product Moment Correlations were calculated as additional analysis. They were between SPA and each of the 28 'independent' variables. In Table 4.56, they are arranged in order from r's for high positive to high negative. The exercise was intended to satisfy curiosity and to enable one to see the magnitude of r's at a glance. In a large sample size such as this (N=6534), even though most r's were significant, their overlap or common variances were negligible. It is therefore not necessary to attach any importance to those correlations.

The interpretations of the results given in this research are based upon the researcher's underlying theory regarding 'Self-Perceived Achievement' (SPA) expounded on pages 5-8. It is not inconceivable, however, that other plausible and justifiable interpretations can be advanced, using a different perspective.

In summing up the main findings of this research, it will be recalled from Chapter I that this investiagation aimed at the identification of non-cognitive correlates of SPA, the implications of some of which could be of practical use to those engaged or interested in the education and the well-being of the youth.

SPA can be looked at as being 'high' or 'low'. The former is argued to be the less desirable one. It could imply (a) the youth's feeling that he is achieving at his own level of aspiration which, in turn, may be unrealistically low (or sometimes high); (b) that the youth is unable to perceive his academic grades realistically because he does not understand their value as such, or he has a feeling of disgust for schooling; (c) that the youth is probably functioning in a world of fantasy or dreamland as an escape device.

The 'high' SPA, thus looked at, is less conducive to youth's mental-health and, therefore, any attempt to reduce its size should be welcome and recommended

Contrariwise, 'low' SPA probably implies a less satisfying feeling whereby the youth perceives his academic grades as having possibilities for further improvement. If so, it has potential for motivating the youth for improving his achievement. 'Low' SPA, therefore, should not be discouraged except under limited circumstances, e.g., when the youth does not possess the ability for such an endeavour.

The research studied twenty-eight non-cognitive variables in relation to SPA:

(a) eighteen scales from the Youth Research Centre (YRC) Survey which dealt with concerns, values, beliefs and attitudes (Table 1.1); and

(b) ten variables of biographical and demographic nature (Table 1.2).

Three of the eighteen scales did not give clear-cut and useful results. They were: Youth Group Vitality, Adult Caring, and Life Partner. The remaining fifteen seemed pertinent to SPA. They showed that, typcially, 'high' SPA was found to be associated with 'high' standing (T score of 56 and over) on the following nine scales:

(1) Academic Problems - worries and frustrations over one's own grades.

(2) Classroom Relationships - a feeling of inadequacy and unwantedness.

(3) National Issues - keen interest in social problems.

(4) Orientation for change - taking a liberal stance to change.

(5) Family Unity - much anxiety over lack of family closeness.

(6) Family Pressure - many difficulties within the family.

(7) Parental Understanding - extreme lack of communication between youth and parents.

(8) Personal Faults - extreme self criticism and feelings of guilt.

(9) Lack of Self-Confidence - little self-confidence.

Similarly, 'high' SPA found associated to a 'low' standing (T score of 45 and less) on these six scales were:

(1) Meaningful Life - contrasting life-style of self-centredness.

(2) Human Relations - absence of openmindedness and compassion for others.

(3) Moral Responsibility - living for one's own self (privatism).

(4) Family Social Concerns - less family involvement in human needs.

(5) Maturity of Values - inability to move toward achieving a specific goal.

(6) Self Regard - inability to accept one's self as a person of worth.

Taking the ten biographical and demographic variables, it was found that 'high' SPA was associated with a 'high' standing on:

(1) Drug (including Alcohol) Usage.

(2) Age - 18 Year-Olds.

(3) Family Unit - 'Separated' Parents.

(4) Size of Family-'Large' (i.e. with 3 or more children).

(5) Sex - Male (Boys).

(6) Type of School Attending -'Others' (including Vocational/ Technical).

(7) Religious Affiliation (Denomination) - Catholic.

'Low' standing on the following was associated to the 'high' SPA:

(1) Socio-Economic Status of Parents.

(2) Parent/Guardian's Educational Status.

(3) Religiosity of Youth - lack of dedication.

SUGGESTIONS FOR FURTHER RESEARCH

This research was not conducted under the 'best' circumstances. Some of the undesirable features were, for instance, the nature of the sample and the instrument used. On the basis of the experience derived, however, a few ideas for further research are given below for the benefit of future researchers in this area.

1. Research in Another Culture

In the event of a replication of this research in another cultural setting (in which this researcher is keenly interested), the Instrument would need to be modified with relevance to the particular cultural environment. In Nigeria, for example, certain other major Religious Denominations (Religious Affiliations) will need to be specified instead of lumping all of them under the catch-all phrase, 'OTHERS'. Such religions are Islam, Cherubim and Seraphim, Jehovah Witness, and other non-western religions.

2. The Population, Sample Source and Size

The reference population from which the data for this research were collected two years ago has probably undergone certain notable changes. In such a case the generalizations could be out-dated. In a cross-cultural research, therefore, the time of data collection should be as close as possible.

The sample for this study was rather unrepresentative, being largely collected from an ecumenical (or religious) source. It did, however, contain a sizable number of youths with non-religious affiliations also. Further researchers should guard against this limitation.

It is further suggested that the massive sample size of the present study (6,534) can be considerably reduced, say to a fifth, without loss in the quality of the findings, e.g. in regard to the size of type II error.

3. Extension in the Analyses of the Data.

It is suggested that in order to provide additional useful information, data could possibly be re-analyzed so as to examine higher order interactions also. It may also be worthwhile to examine the 28 variables in a multiple regression technique.

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APPENDIX A

RESULTS OF A PILOT STUDY REGARDING SPA.

Results of a Pilot-Study Regarding SPA

The validity of the psychological concept of "Self Perceived Achievement" (SPA) as hypothesized in this research could be open to some questions. One could think, for example, that SPA is not different from actual grades or achievement. A pilot study was, therefore, undertaken on this point.

A 20-item questionnaire (attached) was constructed in consultation with the members of the researcher's Ph.D. committee. It was administered to 175 high school students aged 15-18 years in the Edmonton Separate and Public School Boards (in Alberta, Canada) in November 1972.

The respondents' Grade Point Averages (GPA's) were obtained from the school records.

The correlation between the GPAs (actual academic achievement) and the responses to the SPA item (included as #8 in the present Questionnaire) was found to be .432, showing less than eighteen percent common variance or overlap between the two variables. This was interpreted as sufficient evidence in favour of the concept of SPA as used in this study.

The pilot study was also extended for establishing the reliability of the responses to the SPA item. For this purpose, the questionnaire was readministered to over 102 of the original 175 respondents in one school after a week's interval. The test-retest reliability (correlation) of SPA was found to be .74. This was accepted as being respectable enough specially considering the fact of there being a single item.

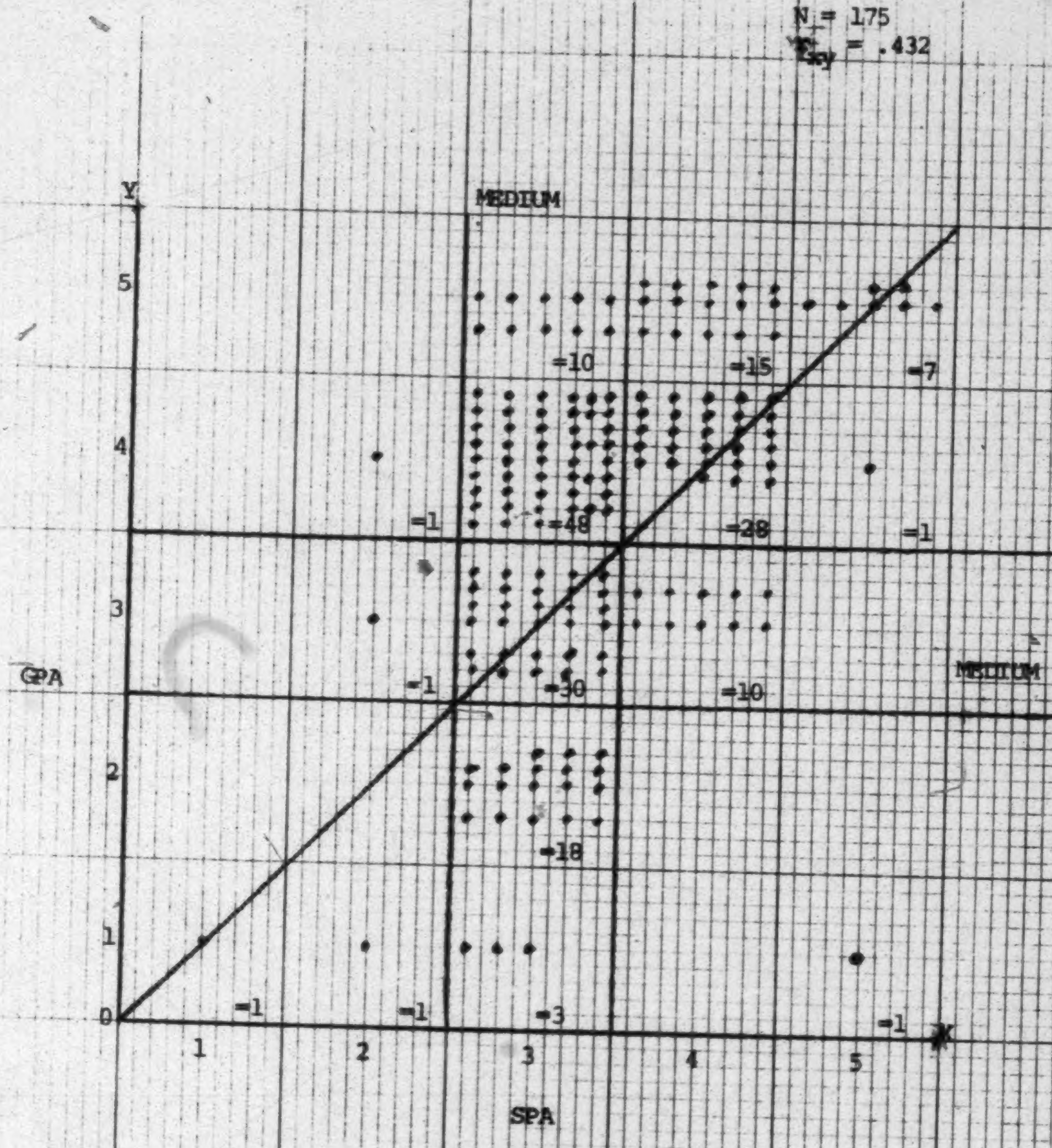

FIGURE A.1 A SCATTERGRAM FOR SPA - GPA

10 X 10 TO THE INCH 46 0702

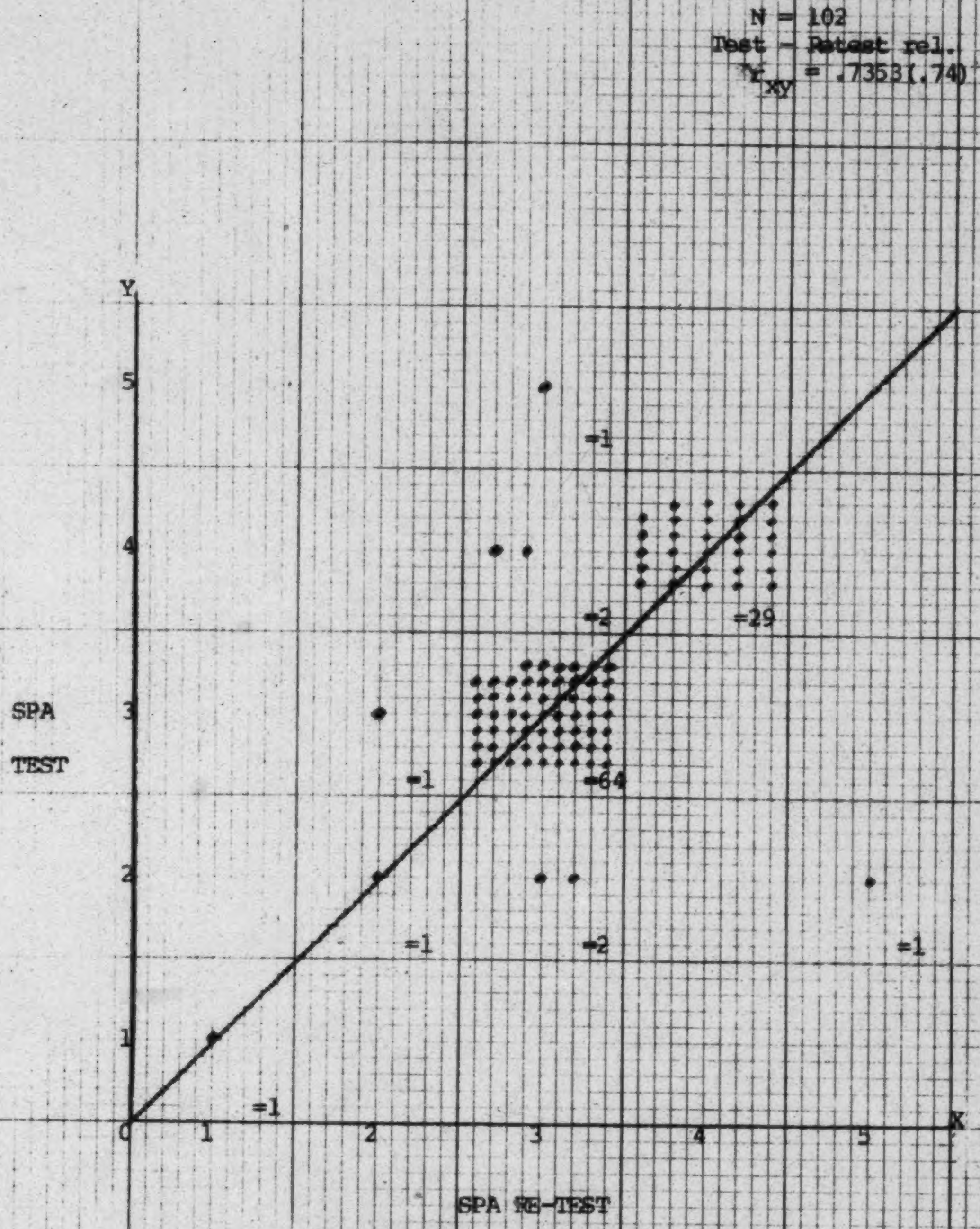

FIGURE A.2: A SCATTERGRAM FOR SPA TEST - RETEST.

QUESTIONNAIRE

INSTRUCTIONS.

1. Fill in your name, etc., on the separate answer sheet provided.
2. Select the best response to each item.
3. Answer all the items.
4. Use the pencils provided for blackening the correct spaces.
5. If you want to change your answer, erase properly before filling in the correct answer.
6. Return the separate answer sheet along with the questionnaire when completed.

---

1. How confident do you feel about your ability to do High School work?

   A. Very Much
   B. Quite a Bit
   C. Very Little
   D. Not at all

2. How seriously do you take your studies at school?

   A. Very Much
   B. Quite a Bit
   C. Very Little
   D. Not at all

3. How friendly are your classmates with you?

   A. Very Much
   B. Quite a Bit
   C. Very Little
   D. Not at all

4. How satisfied are you with the grades you got during the past six months to one year in relation to what you actually expected?

   A. Very Much
   B. Quite a Bit
   C. Very Little
   D. Not at all

5. How often do you participate in your school sports?

   A. All the time
   B. Most times
   C. Few times
   D. Never

6. If you worked harder do you think it would raise your grade?

   A. Yes
   B. No

7. If you had a choice would you attend a different school?

   A. Yes
   B. No

8. Which of the following best describes the kind of grades or marks you get at school?

   A. Excellent grades
   B. Above Average grades
   C. Average grades
   D. Below Average grades
   E. Very Low grades

9. How different are your interests from those of your age-group in your class?

   A. Not at all
   B. Very little
   C. Quite a bit
   D. Very much

10. Whom do you consider most suitable to supervise your classroom discipline?

    A. Student Union Class Representative
    B. Class Teacher
    C. Teacher Supervisor
    D. Principal

11. How much help do you get at home in doing your school assignment?

    A. Very much
    B. Quite a Bit
    C. Very Little
    D. Not at all

12. How often do your parents/guardians call at the school to discuss your progress with you teachers?

    A. Not at all
    B. Rarely
    C. Often

13. If a classmate hurts your feelings, to whom would you like to complain?

    A. Parents/Guardians
    B. Other classmates
    C. Teachers
    D. Principal

14. Do your classmates think that you work hard?

    A. Yes
    B. No

15. Do your classmates think that you are a high achiever?

    A. Yes
    B. No

16. Is it possible for you to work harder to raise your grade?

    A. Yes
    B. No

17. How often do your classmates seek your help in doing their school assignments?

    A. Very much
    B. Quite a bit
    C. Very little
    D. Not at all

18. How often do you visit the homes of your classmates?

    A. Very often
    B. Quite a bit
    C. Very little
    D. Not at all.

19. Do your parents/guardians attend your school parties and sports?

    A. Very often
    B. Quite a bit
    C. Very little
    D. Not at all.

20. If you intend to celebrate your birthday, how many persons from your own class would you like to invite?

A. None
B. 1-3
C. 4-6
D. Over 6.

APPENDIX B

THE INSTRUMENT

(QUESTIONNAIRE FOR THE 28 VARIABLES)

FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL
PSYCHOLOGY
TELEPHONE (403) 432-5245

THE UNIVERSITY OF ALBERTA
EDMONTON 7. CANADA

June 5, 1973

Dr. M. P. Strommen,
122 West Franklyn Avenue,
Minneapolis, Minnesota, 55404,
U. S. A.

and

Dr. R. K. Gupta,
Department of Educational Psychology,
University of Alberta,
Edmonton, CANADA.

Dear Sir(s),

May I seek your express permission as co-authors of the Youth Research Centre Survey (1971), to include certain parts of the Questionnaire in my Ph.D. Dissertation.

My present research entitled, "Non-Cognitive Variables and Self-Perceived Achievement" is based on certain selected items from the questionnaire. I am very grateful to you for making this instrument available to me for my research.

Yours sincerely,

Berepiki

C.I. Berepiki.

CIB*gjm

YOUTH RESEARCH CENTER
122 WEST FRANKLIN AVENUE · MINNEAPOLIS, MINNESOTA 55404 · PHONE: 612-339-2775

June 7, 1973

Mr. Clifford I. Berepiki
The University of Alberta
Edmonton 7, Canada

Dear Mr. Berepiki:

This is to grant you the permission of Youth Research Center to use items from the Youth Research Survey (1971) in your doctoral dissertation.

I do request that you please specify those portions of the Survey which will be used and also that you send a copy of your dissertation when it is finished.

May you have an interesting time as you get further into your research.

Sincerely,

Milo L. Brekke

Milo L. Brekke
Vice President, Research

MLB:mko'b

cc: Dr. R. K. Gupta

EXECUTIVE STAFF

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JOHN J. ZIEGLER, Ph. D. Cd.
Executive Assistant, Human Relations

THE INSTRUMENT

QUESTIONNAIRE FOR THE 28 VARIABLES

Variable 1 (Scale #1)

Choice of Responses to questions 1 - 19.

N - Never Bothered, NL - No Longer Bothered,

V - Very Much Bothered, Q - Quite a Bit Bothered,

S - Somewhat Bothered; L - Very Little Bothered.

I am bothered by the fact that ....

1 (21) We are not close as members of a family ....

2 (31) We need a greater feeling of love in our family ....

3 (39) There are not enough social activities in my home.............

4 (48) My family is not as happy as I wish it were...................

5 (67) The members of my family are not considerate of each other....

6 (74) My father and mother do not get along as they should..........

7 (84) My father is not as interested in me as I would like..........

8 (91) I do not understand my parents................................

9 (97) My mother is not as interested in me as I would like..........

10 (102) We do not do things together as a family......................

Variable 2 (Scale #2)

11 (22) My parents seem to have forgotten how it feels to be young....

12 (32) It is hard to discuss my problems with my mother..............

13 (40) My parents (mother or father) nag me.........................

14 (49) My parents (mother or father) try to pry into my private life..

15 (58) My parents (mother or father) do not like some of my friends...

16 (68) My parents (mother or father) do not understand my dating problems...

17 (75) My parents (mother or father) do not let me make my own decisions ....

18 (95) My parents (mother or father) are too strict.................

19 (103) My parents (mother or father) do not trust me................

Variable 3 (Scale #3)

Choice of responses to questions 20-26.

"Yes" - if the statement is true.

"No" - if the statement is not true.

20 (202) My parents are separated (or divorced) ....

21 (204) I am frequently ill ....

22 (205) Financial troubles create difficulties in my home ....

23 (209) I have trouble getting along with my father ....

24 (210) I have trouble getting along with my father ....

25 (217) My father is seldom home ....

26 (220) We have had serious difficulties in our home (prolonged illness, unemployment, death or injuries, personal problems) during the past year...

Variable 4 (Scale #4)

Choice of responses to question 27.

N - Never Bothered; NL - No Longer Bothered;

V - Very Much Bothered; Q - Quite a Bit Bothered

S - Somewhat Bothered; L - Very Little Bothered.

I am bothered by the fact that ....

27 (86) I fall in love too easily ....

Choice of responses to questions 28 - 33.

N (Never) - I do not remember ever wondering about this.

NL (No Longer) - I used to think about this sometimes, but I haven't thought it at all lately.

V (Very Much) - I probably spend some time almost every day thinking about this.

Q (Quite a Bit) - I probably don't think about this every day, but I think about it quite often.

S (Somewhat) - I think about this sometimes, but not as much as "quite often".

L (Very Little) - I think about this once in a while, but not very often.

I wonder about ....

28 (126) What to look for in a life partner ....

29 (128) Whether I will marry someone who will give me happiness....

30 (129) How to keep boys/girls interested in me ....

31 (130) Whether my sexual desires are normal ....

32 (132) Whether I will find a life partner ....

33 (133) Whether I can find a life partner who feels the way I do about things that are right or wrong ....

Variable 5 (Scale #5)

Choice of responses to questions 34 - 39.

N - Never Bothered; NL - No Longer Bothered

V - Very Much Bothered; Q - Quite a Bit Bothered

S - Somewhat Bothered; L - Very Little Bothered.

I am bothered by the fact that ....

34 (23) I am easily carried away by my emotions ....

35 (33) I worry about little things ....

36 (38) I am too anxious to please others ....

37 (44) I lack confidence when reciting in the class ....

38 (52) I am afraid of failure or humiliation ....

39 (55) I lack the personality and the ability to be a leader in a group ....

40 (61) I am afraid of making mistakes ....

41 (78) My feelings are easily hurt ....

Variable 6 (Scale #6)

42 (25) I have little interest in school studies ....

43 (34) I do not take my studies seriously enough ....

44 (62) I don't know how to study well ....

45 (69) I feel that I am not as smart as others of my age ....

46 (70) There are those who are smarter than I am and get better grades ....

47 (98) I have difficulty keeping my mind on my studies ....

48 (106) I am not satisfied with the grades I get ....

49 (123) I daydream too much ....

Choice of responses to question 50.

N (Never) - I don't remember ever wondering about this.

NL (No Longer) - I used to think about this sometimes, but I haven't thought about it at all lately.

V (Very Much) - I probably spend some time almost every day thinking about this.

Q (Quite a Bit) - I probably don't think about this every day, but I think about it quite often.

S (Somewhat) - I think about this sometimes, but not as much as 'quite often'.

L (Very Little) - I think about this once in a while, but not very often.

I wonder about ....

50 (131) Whether I have the ability to do college work ....

Variable 7 (Scale #7)

Choice of responses to questions 51-61.

N - Never Bothered; NL - No Longer Bothered;

V - Very Much Bothered; Q - Quite a Bit Bothered;

S - Somewhat Bothered; L - Very Little Bothered.

I am bothered by the fact that ....

51 (43) I don't do enough to help others ....

52 (57) I cannot forgive myself for things I have done ....

53 (65) I cannot keep away from thinking thoughts I feel I shouldn't have ....

54 (73) I cannot live up to the standards I have set for myself ....

55 (104) I don't know how girls (or boys) think ....

56 (110) I am often jealous of my friends ....

57 (117) It seems that I can never do anything right ....

58 (119) I often feel sorry for myself ....

59 (120) I do not know what to do when someone makes fun of others ..

60 (121) I am sometimes so conscious of my faults that I enjoy nothing ....

61 (122) I am unsure of myself ....

Choice of responses to question 62.

N (Never) - I don't remember ever wondering about this.

NL (No Longer) - I used to think about this sometimes, but I haven't thought about it at all lately.

V (Very Much) - I probably spend some time almost every day thinking about this.

Q (Quite a Bit) - I probably don't think about this every day, but I think about it quite often.

S (Somewhat) - I think about this sometimes, but not as much as "quite often".

L (Very Little) - I think about this once in a while, but not very often.

I wonder about ....

62 (127) Why I behave as I do ....

Variable 8 (Scale #8)

Choice of responses to questions 63-88.

N - Never Bothered; NL - No Longer Bothered

V - Very much Bothered; Q - Quite a Bit Bothered

S - Somewhat Bothered; L - Very Little Bothered

I am bothered by the fact that ....

63 (27) Classmates at school could be more friendly ....

64 (36) There are cliques (closed groups) in my school ....

65 (46) Some classmates are inconsiderate of my feelings ....

66 (60) I do not know what a boy (or girl) expects when on a date.....

67 (64) Outside of my family there is no group where I feel I really belong ....

68 (71) Some teachers are sarcastic and critical of what I do ....

69 (72) In a group I often act differently from what I really am......

70 (77) There are not enough opportunities to be with a mixed group (boys and girls) in social activities ....

71 (79) Some of my teachers are not interested in me ....

72 (80) My interests are often different from those of others of my age ....

73 (99) Some of my teachers do not understand me ....

74 (100) I do not easily get along with others ....

75 (107) I feel pressure at school to do what others do................

76 (108) I lack ability to participate in sports ....

77 (112) I do not have many friends at school ....

Variable 9 (Scale #9)

78 (28) Our national government often seems unresponsive to the needs of people ....

79 (30) Pollution of our air and water threatens to destroy all human life ....

80 (37) Some of the state laws now being enforced are unjust.........

81 (47) Friends of mine, who don't believe in war, are being forced to enter the military service ....

82 (56) Our world may be destroyed by a nuclear war ....

83 (81) Peace among nations seems impossible ....

84 (83) Revolution and violence may destroy our country soon ....

85 (94) The ideals of the Constitution are far from the realities of America today ....

86 (109) Some people want to destroy the government because they find things to criticize ....

87 (113) There is so much violence and crime today ....

88 (116) Wars seems to be a useless butchery ....

Variable 10 (Scale #12)

Choice to responses to questions 89-95.

SA	A	N	D	SD
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

89 (224) My concerns focus more on my own needs than on the needs of others ....

90 (230) I am not sure enough of my beliefs to answer when someone challenges my conviction ....

91 (234) I frequently feel torn between conflicting values, beliefs, and desires ....

92 (235) What I think of myself is strongly influenced by what my friends and others tell me ....

93 (236) A girlfriend/boyfriend could convince to do something which I believe to be wrong ....

94 (238) My evaluation of current issues is usually influenced more by own judgment than by the opinions of others ....

95 (240) My friend could not persuade me to do something which I believe to be wrong ....

Variable 11 (Scale #13)

Choice of responses to questions 96-106.

SA	A	D	SD
Strongly Agree	Agree	Disagree	Strongly Disagree

96 (161) The student should have more to say about what is taught in my high school ....

97 (162) Courses in school do not apply to the world I know ....

98 (163) America needs stricter law enforcement ....

99 (164) A citizen should have the right to decide in which wars he will fight ....

100 (165) As long as you love the other person, sexual intercourse before marriage is okay ....

101 (166) All war is basically wrong ....

102 (167) It is wrong to date a person of another race ....

103 (169) Every young man should be willing to serve in the armed forces...

104 (171) The protests of college students are a healthy sign for America ....

105 (172) Every person has a right to free medical care if he needs it but cannot afford it ....

106 (174) Every person has a right to adequate housing even if he cannot afford it ....

Variable 12 (Scale #14)

Choice of responses to questions 107-116.

SA	A	N	D	SD
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

107 (221) When a person wrongs his fellowman, he sins against God.....

108 (222) I have found a way of life that gives me direction..........

109 (223) Persons who practise wise restraint and self control are to be admired ....

110 (225) The kind of moral decisions I make now will affect my future happiness ....

111 (226) My beliefs and values are still very much influenced by what I was taught when younger ....

112 (227) God helps me decide what is right or wrong behaviour........

113 (229) I want to be the kind of person who helps people...........

114 (231) What is right or wrong is only one man's opinion...........

115 (233) It is no one else's business if someone wants to do what harms him ....

116 (239) My understanding of myself is strongly influenced by experiences and feelings I had when I was much younger......

Variable 13 (Scale #15)

Choice of responses to questions 117-133.

(i) Read through the whole list carefully.

(ii) Mark "E" against five you decide to be of "EXTREME IMPORTANCE".

(iii) Mark "L" against five you decide to be of "LEAST IMPORTANCE".

(iv) From the remaining, mark "Q" against those five you decide to be of "QUITE IMPORTANCE".

(v) Finally, mark "S" against the five you decide to have "SOME IMPORTANCE" to you.

117 (241) ADVENTURE (exploration, risks, danger) ....

118 (242) SERVICE (devotion to the interests of others).............

119 (243) RECOGNITION (being important, being well-liked)...........

120 (244) ETHICAL LIFE (responsible living toward others)...........

121 (245) MEANINGFUL WORK (sense of purpose, a job that is relevant).

122 (246) WISDOM (mature, understanding, insight)...................

123 (247) PLEASURE (excitement, satisfaction, fun)..................

124 (248) HONESTY (being frank and genuinely yourself with everyone).

125 (249) PERSONAL FREEDOM (independence, making own choice).........

126 (250) MONEY (plenty of money for things I want).................

127 (251) PERSONAL POWER (having influence and authority over others).

128 (252) RELIGION (religious belief, relationship with God, meaningful life)......................................

129 (253) LOVE (warmth, caring, giving and receiving of love)........

130 (254) PHYSICAL APPEARANCE (attractiveness) ....

131 (258) SKILL (being good at doing something important to me)......

132 (259) FORGIVENESS (being willing to pardon others)...............

133 (260) FAMILY HAPPINESS (mutual caring among family members)......

Variable 14 (Scale #18)

Choice of responses to questions 134-146.

Yes - I feel this way usually.

No - I do not feel this way usually.

Sometimes - I feel this way sometimes.

134 (1) On the whole, I am satisfied with myself...................

135 (5) I feel that I have a number of good qualities...............

136 (7) I am as capable as the next person of my age................

137 (9) I feel I do not have much to be proud of ....

138 (11) I feel a sense of purpose in my life........................

139 (13) I tend to be a lonely person................................

140 (14) I feel that my future is in good hands......................

141 (15) I feel I am worth something as a person.....................

142 (16) I wish I had more respect for myself........................

143 (17) I feel no one knows the real me ....

144 (18) I hold a positive attitude toward myself...................

145 (19) I have a feeling I will not live very long ....

146 (20) I find life exciting and full of fun ....

Variable 15 (Scale #19)

Choice of responses to questions 147-149.

"Agree" - If the statement describes you or what you think.

"Disagree" - If the statement does not describe you or what you

"?" - If you are not sure.

147 (264) Jews are more likely than Christians to cheat in business..

148 (266) I wouldn't mind having a person of another race for a next door neighbour ....

149 (270) Because Jews are not bound by Christian ethics, they do things to get ahead that Christians generally would not do.

Choice of responses to question 150

Yes - This statement seems true of my family.

No - This statement does not seem true of my family.

? - I can't decide.

My impression is that.........

150 (333) My family would support neighbourhood efforts to keep out persons of other races ....

Choice of responses to question 151-157.

Yes - If you believe the statement.

No - If you don't.

? - If you are not sure.

151 (392) Mental illness is a sign of God's displeasure over certain sins ....

152 (396) People in enemy countries should suffer as they have made others suffer ....

153 (399) I believe that excluding black (or racial groups) from church activities would be justified in some communities...

154 (405) Persons of other nationalities and religions should be kept out of our country ....

155 (406) No punishment is too severe for those persons guilty of sex killings ....

156 (410) Science opposed to Christianity ....

157 (412) The church should not send food to communist people........

Choice of responses to question 158.

Yes - This is true of me.

No - This is not true of me.

? - I am not sure.

158 (418) There are some non-church activities from which I could justifiably exclude certain people because of their race...

Variable 16 (Scale #22)

Choice of responses to questions 159-168.

Yes - This statement seems true of my youth group.

No - This statement does not seem true of youth group.

? - I can't decide.

My impression is that ....

159 (321) Our youth group is fun to be with ....

160 (322) Members of our group are at ease in praying together and sharing their faith ....

161 (323) The entire group feels a part in making important decisions.

162 (324) There is a spirit of togetherness among us ....

163 (325) There is a continual effort to improve our youth group.....

164 (326) Part of our youth programme is devoted to service to others ....

165 (327) It is easy to share and discuss my personal problems when together with youth of our congregation ....

166 (328) Youth in my church participate actively in the life of the congregation ....

167 (329) Boys are involved as much as girls in programmes and leadership ....

168 (330) Our youth group is interested in discussing how the Christian should relate to civil rights, war, hunger, etc..

Variable 17 (Scale #23)

Choice of responses to question 169-179.

Yes - This statement seems to be true of my church.

No - This statement does not seem true of my church.

? - I can't decide.

My impression is that ....

169 (305) Most adults in my congregation are concerned about such

169 (305) world problems as starvation, poverty, war.................

170 (306) When I attend worship services I am among friends...........

171 (307) Our congregation is seeking ways to respond more meaningfully to human needs ....

172 (309) I would like to follow the example of my congregation in its stand on social problems ....

173 (310) My church is trying to help families improve parent-child relationships ....

174 (312) Many of the members seem to care a lot for each other.......

175 (313) My church looks for ways to bring young people and adult members together to share points of view ....

176 (314) People who are quite different (richer, poorer, another race, differences in dress and hair) will be welcome in our church ....

177 (317) Most of my friends would feel welcome at any service or meeting of my church ....

178 (318) Most adults in my congregation would be able to tell you what the purpose of our church is ....

179 (320) My church seems interested in my age group ....

Variable 18 (Scale 24)

Choice of responses to questions 180-187.

Yes - This statement seems true of my family.

No - This statement does not seem true of my family.

? - I can't decide.

My impression is that ....

180 (331) My family seldom does anything about helping meet social problems ....

181 (332) I am free to invite persons of other races into our home.....

182 (334) My parents are quite well informed about what is happening in their community and the world ....

183 (335) My parents often help someone in need ....

184 (336) My father and mother do not appear to be concerned about social issues ....

185 (337) If the issue arose I believe my parents would rise in defense of someone being persecuted or hurt ....

186 (338) I appreciate the example in caring for others that my parents set for me ....

187 (339) My family discusses the use of our money as it relates to sharing with others ....

BIOGRAPHICAL AND DEMOGRAPHIC VARIABLES

Variable 19 (Sex - Personal Data)

Mark 'M' or 'F' to indicate Male or Female.

Variable 20 (Age - Personal).

Mark the space under your present Age.

Variable 21. (Socio-Economic Status of Parents - Item #195)

The occupation of the main wage earner in my family is..........

A. Profession (doctor, lawyer, teacher, minister, or other professional position); B. Farmer, C. Sales, White collar, business; D. Skilled, unskilled manual work; E. Service work (barber, waiter); F. None of these.

Variable 22. (Religiosity - Item #190)

During the past six months I have gone to church, synagogue or temple (or mosque) ....

A. Several times a week;

B. About once a week;

C. About every other week;

D. About an average of once a month;

E. Rarely;

F. Not at all.

Variable 23. (Religious Affiliation - Personal Data).

Mark that number in the correct space provided on the answer sheet.

1. Baptist
2. Episcopal
3. Lutheran
4. Methodist
5. Presbyterian
6. United Church of Canada
7. United Church of Christ
8. Orthodox
9. Roman Catholic
10. Jewish
11. Other
12. I do not attend any church.

Variable 24 (Parent's/Guardian's Educational Status - Item a.196 and b.197)

Choice of responses:

A. 8 grades or less;

B. Some vocational or high school graduate;

C. Some college or university work;

D. College or university graduate;

E. Some graduate training.

(a) How much education has your father (or male guardian) had?

....

(b) How much education has your mother (or female guardian) had?

....

Variable 25 (Drug including Alcohol, Usage - Item #198)

Which statement best describes your use of drugs?..........

A. I had not used drugs.

B. I use pot (marijuana) occasionally.

C. I use pot frequently.

D. I use pot frequently and have used acid, - LSD.

E. I have used speed, either alone or with other drugs.

F. I have used heroin or other hard narcotics.

Variable 26 (Family Unit - Item #202)

My parents are separated (or divorced).............

Yes/No

Variable 27 (Type of School Attending - Item #193)

What type of school do you attend?...............

A. Public

B. Religiously sponsored (parochial)

C. Private

D. Vocational or technical

E. Other

Variable 28 (Size of Family - Item #214)

I have three or more brothers or sisters ....

Yes/No

SELF PERCEIVED ACHIEVEMENT (SPA) VARIABLE (YRS #189)

"Which of the following best describes the kind of grades or marks you get at school?"

A. Excellent grades

B. Above Average grades

C. Average grades

D. Below average grades

E. Very low grades.